

THE OLD CURIOSITY SHOP.



A
JOURNAL DEVOTED TO
PHILATELY, NUMISMATICS.
NATURAL HISTORY, ANTIQUITIES &
BRIC-A-BRAC



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— CONTENTS FOR —

FEBRUARY, 1888.



EDITOR:

Will M. Clemens

P. O. Box 917. San Diego, Cal.



1. The Lotus of the East, - Will M. Clemens.
2. Etymology of Coins, - R. D. Brown.
3. Alsace and Lorraine, - L. W. Durbin.
4. Historical Notes, - - - - -
5. The Editor's Gossip, - - - - -
6. Coins of Marc Antony, - Dr. Robt. L. Morris.
7. U. S. Proprietary Stamps, - - - - -
8. An Indian Idol, - - - - -
9. Preparing Skeleton Leaves, - - - - -
10. New Advertisements, - - - - -

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VOL. VII.

FEBRUARY, 1888.

No. 35.

THE LOTUS OF THE EAST.

By WILL M. CLEMENS.

The Indian Lotus, or Lily of the East, was to the ancients full of meaning, and is to be found all over the East. Egypt, Palestine, Persia and India, present the flower in the decorations of their architecture, in the hands and on the heads of their sculptural figures, whether in statue or in bas relief. It is found in the sacred vestments and architecture of the tabernacle and temple of the Israelites. The flower is also mentioned by the Savior, as an image of peculiar beauty and glory, when comparing the works of nature with the decorations of art. It is also represented in all pictures of the Salutation of Gabriel to the Virgin Mary, and in fact has been held in mysterious veneration by people of all nations and all times.

The old heraldic work of "The Theater of Honor," published in France about two hundred years ago, gives a curious account of the lotus flower. It is the symbol of divinity, of purity, and abundance, and of a love most complete in perfection, charity and benediction. In the Bible, that mirror of chastity, Susanna, is defined Susa, which signifies the lily flower. The chief city of the

Persians bore that name for its excellency. The lily's three leaves appearing in the arms of France, mean piety, justice and charity.

The Persians attached a peculiar sanctity to the flower. Water, in their belief, was held in the next degree of reverence to fire; and the white flower which sprung from the bosom of the colder element, was considered an emblem of its purity, submissiveness, and, above all, of its fecundity when meeting the rays of the great solar flame. These symbols united in the lily their joint properties had produced, represented to the poetical conception of the East; first, the creative and regenerating attributes of the Supreme Being himself; and, secondly, the impartial powers of the great elements of earth, air, water and fire, to act on each other, so that, at the return of certain seasons, moisture should spread over the land, from the clouds or the rivers, the air should dry the ground, the sun's beams fructify it, and the grateful earth, at the call of all united in the genial breath of Spring, pour forth her increase. Hence, as the sovereigns of the East have always been revered, according to a tradition of their being the express vicegerents of the Deity, it is not surprising to see the same emblematic flower carried in a pro-

cession to their honor, which would be found "breathing sweet incense," amongst the symbols of an entirely religious festival.

ETYMOLOGY OF COINS.

By R. D. BROWN.

Barter or the exchange of wealth is one of the oldest of human institutions and many of the terms connected with it go back to early times for their origin. Pecuniary comes from "pecus," and dates from ages when cattle were the chief wealth and values were reckoned by the number of the herd. The word money is from *moneta* because in Rome coins were first regularly struck in the temple of Juno Moneta, which again was derived from *monere*, to warn, because it was built on the spot where Manlius heard the Gauls approaching to the attack of the city. "Coin" is probably from the Latin *cuneus*, a die or stamp. Many coins are merely so-called from their weight, as for instance the pound, the French livre, Italian lira; others from the metal, as the "aureus;" the "rupee" from the Sanskrit "rupya," silver; others from the design, as the angel, the testoon, from *teste* or *tete*, head; others from the head of the state, as the sovereign, crown; others from the proper name of the monarch, such as the daric, from Darius, the philip, louis d'or, or the napoleon. The dollar or thaler is short for the Joachimsthaler, or money of the Joachims Valley, in Bohemia, where these coins were struck

in the sixteenth century. Guineas were first called after the country from which the gold was obtained, and the franc is an abbreviation of the inscription *Francorum Rex*. The "sou" is from the Latin *solidus*. The word shilling appears to be derived from a root signifying to divide; and in several cases the name indicates the fraction of some larger coin, as the denarius, half-penny, cent and mill. The pound was originally not a coin, but a weight, and comes from the Latin *pondus*. The British pound originally was a pound of silver, which was divided into two hundred and forty pennies. The origin of the word penny is unknown. Some have derived it from *pendo*, to weigh; but this does not seem very satisfactory. The word "sterling" is said to go back to the time of the Conquest, but the derivation has been much disputed. Some have supposed that it was at first attributed to the coins struck at Sterling, but for this there is not the slightest evidence; that the name was derived from coins having a star on the obverse, but no coins which could have given rise to such a name are known. The most probable suggestion is that it has reference to the Easterling or North German merchants.

ALSACE AND LORRAINE.

By L. W. DURBIN.

From an historical point of view, the stamps which we call Alsace and Lorraine are exceedingly interesting. They were not only used in the two provinces

whose names they bear, but also in all parts of France occupied by the German army, and that included the country as far north as Amicus and west to Le Mans. Hence, one could make a collection of those stamps which would show by the postmarks all the towns and cities occupied by the invaders, and it would not be impossible to form it so that it would give by the dates of the postmarks, pretty nearly a correct idea of the time the various places were held. The design of the stamps is very plain, and inexpensive. The sheets were made as follows: The sheets of paper were covered with a network of fine lines and then broad bands of color were printed across and vertically. In the squares thus formed, the words "Postes" and "Centimes" with the numeral of value were printed.

It sometimes happened that the sheets, after the network was put on, were laid in the press upside down, for printing the value on, and thus varieties of all denominations are found with the points of the network up as well as down. Those with the points down are the errors and all are scarce, the 10 centimes being the oftener met with. There are also numerous varieties of type and color owing to different printings and settings of the type.

The illustration shows the style of the stamps, of which the following is the set: 1 centime, green; 2 centimes, brown; 4 centimes, gray; 5 centimes, green; 10 centimes, bistre; 20 centimes, blue; 25 centimes, brown. They were issued in

August, 1870, except the 5 and 25 centimes, which did not come out until January of the next year. As the territory of France was evacuated by the Germans the French stamps took the place of those of Alsace and Lorraine and after the cession of the two provinces, German stamps were alone used there. It is asserted that the people of Alsace and Lorraine are not contented under German rule, and it is certain the French cannot become reconciled to the division of their country which took place. Hence, these stamps may at some future time become still more interesting to the collector, by reason of the territory which they once covered, becoming again the battlefield of the two mighty nations.

HISTORICAL NOTES.

The ancients used black and white beans as ballots.

The ancient name of the Scilly Isles was the Cassiterides or Tin Islands.

Russian prisoners were first sent to Siberia in 1710 by Peter the Great.

Brotherhoods for building bridges existed in the twelfth century.

The Thirty Years' War began in Bohemia in 1618 and ended in Westphalia in 1648.

Forty years ago 40,000 houses were built in Great Britain; now the number is 80,000.

The system of paying workman's wages in goods instead of money was prohibited by the English Parliament in 1831.

THE EDITOR'S GOSSIP.

THE OLD CURIOSITY SHOP makes its appearance this month for the first time since October, 1887. The removal of the editor from Jamestown, N. Y. to San Diego, California, a distance of many miles, has been the direct cause of all this delay. The office materials of the magazine were shipped by freight on the first of November, and it required over two months, owing to blockades on the railroads, for the freight to reach its destination. Now, that we are in condition to issue our magazine again, we can promise that the publication will appear promptly on time each month hereafter.

* * *

Will M. Clemens, the original founder of the magazine, which is now one of the oldest stamp and coin publications in this country, will remain as editor of the paper. C. R. Orcutt, well known as the publisher of the *West American Scientist*, will hereafter be the publisher of THE OLD CURIOSITY SHOP. Re-established upon a new and firmer basis, THE OLD CURIOSITY SHOP enters its new career under very flattering prospects. It desires to extend to each of its readers and patrons A Happy and Prosperous New Year.

* * *

Contributions upon the various subjects to which this magazine is devoted, are solicited from our readers. We intend to present each month the freshest and best ideas, and are willing to recip-

rocate to the full value of every essay or article accepted.

* * *

A treatise on the history of the postal card has been published in Berlin. The originator of the idea is said to have been a German state official, Dr. Stephen, who wrote an essay upon it in 1865. Austria was the first to adopt it, beginning in October, 1869. The first three months witnessed the passage of 2,930,000 cards through the mails. Germany followed suit in 1870, and on the first day after the introduction of the postal card, 45,468 were sent off in Berlin alone; and within two months over 2,000,000 were used. Other countries soon initiated the same step. During the Franco-Prussian war the postal card system was a great boon to both armies. Over 10,000,000 cards passed during the campaign between the German soldiers and their friends at home. The greatest proportional consumption of postal cards occurs unquestionably in the United States. The whole of Europe is estimated to use annually 350,000,000, while the consumption in the United States will not fall short of 230,000,000.

* * *

An important sale at auction occurred on January 10, by L. J. Bird & Co., the Boston auctioneers. The sale included the valuable collection of E. Locke Mason, of No. 175 Washington street, Boston, and included American and foreign gold, copper, silver and nickel coins, medals, rare old American his-

torical china, early American imprints, currency, store cards, numismatic books and other desirable specimens. We understand that extra good prices were realized at this sale.

* * *

One of the largest collections of American autographs belongs to a gentleman in Boston. Its value, however, is small in comparison to that of many smaller collections. It was made on a wholesale principal of buying whatever was cheap at auction sales. In this way a great many hundred scraps of paper, representing a great variety of styles of penmanship, some of them very badly written, have been bought at an average cost, perhaps, of three or four cents each. In addition, the gentleman has many very valuable specimens, but they do not, on the whole, preserve a high standard for such a collection of American autographs.

* * *

A new issue of copper and bronze coins has been ordered by the government of Japan. This is exclusive information, THE OLD CURIOSITY SHOP having received a few days ago private advices to this effect from Japan. The well known coin, the *tempo*, has not been in circulation in Japan for some months past, and consequently is rapidly becoming rare.

* * *

Six fossil human bodies, those of a man, two women and three children,

have been found in a cave in a coal mine at Bally-Grenay, Pas de Calais, and eleven have been found in an adjoining apartment, with arms and utensils in petrified wood and stone, and precious stones. The walls were decorated with pictures of combats between men and animals of great size.

* * *

Different tribes of Indians use different sorts of poison in their arrow points. The Commanches use the juice of the Spanish bayonet; the Apaches bruise the heads of rattlesnakes with bits of deer liver, allow it to putrefy and dip their arrows in it. The Moquis irritate a rattlesnake until he bites himself, and moisten their darts in the blood. Poisons made from the stings of bees and from ants are used by other tribes.

* * *

Our readers will doubtless appreciate the improved appearance of THE OLD CURIOSITY SHOP. Our aim during the coming year will be to constantly better both the contents and general aspect of our magazine, and we hope to place it at the head of all similar publications in this country. When the value of THE OLD CURIOSITY SHOP is fully known to the dealers they will not hesitate to make their announcements in our advertising columns. There are few publications in this or any other country excelling THE OLD CURIOSITY SHOP as an advertising medium.

COINS OF MARC ANTONY.

By DR. ROBERT L. MORRIS.

The death of Cæsar (B. C. 44), instead of restoring the republican form of government to Rome—as the conspirators Brutus, Cassius and the rest had hoped—removed forever the possibility of such a change; for the whole control of the State fell incontinently into the hands of three unscrupulous men, who, under the name of a triumvirate, or “three-men power,” droye the chariot of State as they listed. “Who is ignorant,” says an old historian, “of the manner in which they sealed their nefarious bond with blood, and overcame all opposition in the blood of the free.”

Obverse. The faces of the triumvirate, Caius Cæsar Octavius, Marcus Antony, and Marcus Æmilius Lepidus, to the right. Busts bare. Beardless. Heads unadorned. No inscription. These portraits will repay close attention. How various the expressions of the three! “Young Octavius,” as Shakespeare calls him, is 22 years of age, as seen on the coin; Marc Antony is 42; Lepidus is older.

Reverse. The Ephesian Diana; adored at Ephesus as the goddess of Nature; whose symbolical figure, by its multitude of breasts and heads of animals hung around it, denotes the fecundity of Nature. The deer on the coin are those caught by herself at Anaurus, and used to draw her chariot.

Inscription. The single word APXIEP (archier) is all that remains of the epigraph which once swept in a half circle

around the goddess. Patin explains it thus: “This colleagueship, so terrible to all good men when it should be destroyed, the priest himself of the temple of Ephesus impressed this coin in the words of the community; so that the name being effaced nothing remains save the name of the priest.”

U. S. PROPRIETARY STAMPS.

There were issued in the United States since 1861 about 825 varieties of private proprietary stamps, that is counting the different kinds of papers, such as “old,” “silk-threaded,” “pink,” and “water-marked,” all of which were ordered by patent medicine dealers and match manufacturers in the U. S., and were only used by such, as they are strictly private. Of the 825 varieties that were issued, about 234 were used by match and medicine firms in the metropolis. Eighty-two kinds made their appearance in the Quaker City; Boston lists about 68 well known specimens; St. Louis comes next with about 46; 25 different styles were used Pittsburg, 21 in Buffalo, 18 in Cincinnati, 16 in Louisville, 14 each in San Francisco and Detroit, 13 each in Baltimore, Providence and Cleveland, while Chicago has 12; the remaining 236 were distributed from and used in smaller cities and towns by patent medicine and match firms. Besides these are some 165 different perforated, including probably 100 varieties unperforated document, and an immense number of spirit, tobacco, cigar, cigarette, and license stamps.

AN INDIAN IDOL.

A remarkable Indian idol was recently taken from Horse creek, in Cedar county, Missouri, the home of the last mound-builders. This Indian or Aztec idol, as it is believed to be, is four feet long, and weighs sixty-four pounds. In general outline or figure it resembles a lizard or chameleon. It is carved out of slate or lead-colored stone or composition of moderate hardness, is as smooth as glass, and shows that it is the work of a person of fine imagination, intelligence and skill, whether he lived one thousand years ago or is living today. On a closer examination the idol is found to be made up of part of a dozen creatures—amphibia, carnivora, insects, reptiles and fowls. The top of the head has the semblance of a flat-bone plate, and is shaped like that of an eagle, with a long, sharp beak. Near the middle of the beak is a horn, like that of a rhinoceros, and of light yellow color. The under part of the head is shaped like that of a turtle or frog, and is of light yellow. The eye is like that of an eagle. It has two legs in front and two behind. The legs are shaped exactly like those of an elephant, have four yellow toes on each foot, and the feet have the spongy appearance peculiar to those of an elephant. Between each pair of legs on the abdomen, is the representation of the plate of bone like that on a turtle. On the neck are two shields, or wing-covers like those on the back of a common beetle. Behind the legs, and about the middle of the

tail, extend a row of diamond shape yellow spots. The idol is in a perfect state of preservation, and at the distance of a few steps, looks as if it were alive.

PREPARING SKELETON LEAVES.

A correspondent of *Knowledge* gives these directions for preparing skeleton leaves: Take a large saucepan of cold water and a piece of scrubbing soap about four inches square, cut into small slices. Gather mature leaves, seed vessel, etc.; put some soap into the water, then a layer of leaves one by one, then more soap, then leaves, and so on. Put on a lid, set the pan by the side of a fire, and let it simmer. After an hour take out a few leaves and try them between the thumb and finger; if the pulp separates readily from the fiber remove them from the fire; if not let the pan remain. Some leaves, such as ivy, orange, etc., are done in an hour or two; others of a tougher fiber take half a day. Seed vessels of a mallow or *compagnia* take a short time. Large poppy or stramonium requires perhaps two days. Now lay a leaf upon a plate, under a tap of running water, and beat it with sharp strokes with a hard brush—say a tooth brush; the green matter will run off with the water. When the skeleton is quite clean, dry it upon blotting paper. To bleach the specimens put a quarter of a pound of chloride of lime into a large bottle of water, cork it and let it stand some days. Strain it and mix with more water in a basin; immerse the leaves,

etc. Again carefully watch and remove them as soon as they are white, for the lime soon renders them brittle and rotten. Wash again in pure water and dry as before. As the stems usually come away from most leaves, it is well to boil several stalks separately, and after bleaching to mount the leaves by gumming them to the stems.



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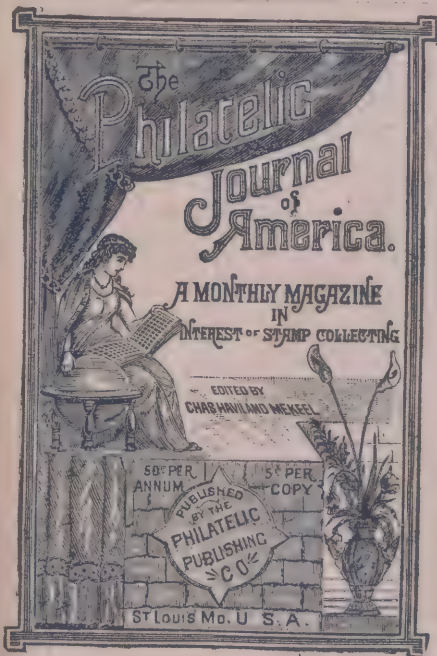
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— MAY, 1888. —

CONTENTS:

	PAGE.
A Wonderful Coast.....	33
Clearing Land in San Diego County.....	35
The Stamps of Switzerland.....	36
The Green Turtle.....	37
Flavor of Pork.....	37
Advertising.....	37
Nate Chauncey's Luck.....	38
Among the Magazines.....	38
Newspapers in 1888.....	38
How to Carve a Fowl.....	38
Giants Among Small Things.....	39
Epoch of the Mastodon in North America.....	40
Opuntia Fruit as an Article of Food.....	40
A Vegetable Garden the Year Round.....	41
A Few Words About Trees of British Columbia.....	42
Editorial.....	43
The 1779 Cent.....	43
The Republic of Salvador.....	44

	PAGE.
Editorial.....	45
A Glance at Books.....	45
Changes in the Color of Grapes Grown in Northwestern Mexico.....	46
The Deer of Southern Lower California.....	46
Poetry—"None of Our Business".....	47
The Lime Kiln Club on Health.....	47
Don't Whine.....	47
Conversation.....	47
A Beautiful Sentiment.....	47
A Good Motto.....	47
A Practical way of Doing Good.....	47
Humming Birds.....	48
One Step at a Time.....	48
Begin.....	48
An Anthem Accurately Described.....	48
Squibs.....	48

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THE OLD CURIOSITY SHOP.

VOL. VII.

MAY, 1888.

No. 38.

A Wonderful Coast.

If you wish to see a strange coast, laughing and bright, green and grand, wild and mountainous, take a sailing vessel and proceed slowly southward of San Juan del Sur, or, still better, if you have time and money hire a party of men and plunge yourself in the wilderness of the west coast of Costa Rica, the fifth of the Central American republics. You will see scenery never to be forgotten as long as you live; you will probably experience accidents and thrilling adventures and perhaps endanger your life, but after all, what is our life? It is sometimes worth while to risk it.

Mighty and magnificent stretches the wild coast of Costa Rica, one unbroken chain of mountains high and low, gloomy and radiant, regular and fantastic—a combination of the most marvelous beauty and imposing grandeur. And all this region covered with tropical forests of giant trees and parasitic plants, fresh and stupendous—a regular virgin, bewildering forest of the south.

Man likes company. Yet if you are tired of life and misfortune, in your heart you will always prefer a desert to a city—a solitude to the noise and turmoil of civilization. For in a forest you are alone; for company you have a magnificent nature; for a bed your traveling blanket; for a cover a dense foliage of leaves or the blue canopy of heaven, and if the freshness of youth has not altogether left you and your heart is yet unspoiled, you will in every step discover new beauties in a tropical forest and you will worship the Almighty who created this grand nature, with sincerity in your soul and with mist in your eyes.

It is very hard traveling in a Central American forest, and you have to move slowly, step by step. Sometimes during a day you cannot go further than a couple of miles from the point of starting, sometimes even less. You have to cut your way through the dense foliage, and besides to look after wild animals and dangerous snakes—for the Costa Rica forest, with all beauties has also its dangers. Cougars reign here in undisturbed possession of the land, and rattlesnake, coral and scorpion are too abundant to be comfortable. Besides all lagoons, creeks and rivers are full of alligators, which grow here and multiply with a rapidity unknown in any other country in the wide world.

The woods are full of birds of brilliant plumage, from noisy macaw to small and beautiful paroquet. The wild turkey also is abundant, and the magnificent curassow hocco is to be met with everywhere. This remarkable bird could be domesticated very easily, and it would be a great addition to our poultry yards, for its flesh is a morsel for the gods. In the last century it was introduced into Holland and into France, where it seemed perfectly acclimated, but the stock was lost amidst the subsequent wars which followed the French revolution. Curassow is a gallinaceous bird, and very large—sometimes even larger than a turkey. Its head is adorned with a crest of feathers, curled forward. There are two species of this magnificent bird in Costa Rica, the black and the brown. I brought some with

me to California, and I sent a few to Europe and they became perfectly tame and domestic in their habits. They could be introduced easily into British Columbia.

The Costa Rican forest is a paradise for peccaries and coatis. Peccary—or chanco del monte, as it is called by the natives—resembles very much a hog, but it is smaller, with a narrow white collar which surrounds the neck. It is a dangerous animal, for if you kill one the whole herd will attack you and make good use of their sharp tusks. Once, near the Gulf of Dulce, I killed a leader of a herd of peccaries, and I saved myself from the infuriated animals by climbing a tree. Yet, even then I was not safe, for the peccaries surrounded the tree and kept me in that uncomfortable position for seven hours, until my companions came to the rescue and dispersed the herd. The flesh of a peccary resembles that of a hog, but tastes rather sweetish.

Coati, or coati-mondi, resembles a racoon, but has a long tail and a very long snout, which is a sort of flexible proboscis. It can climb trees with great agility, looking for insects. They are often domesticated in Costa Rica, and although very amusing, they are rather treacherous.

But the largest animal of Costa Rica is the tapir, which is abundant in swampy localities. The skin is often a quarter of an inch thick and its flesh dark and sweet. The natives called it "buris del monte," or mountain jack-ass. Some naturalists assert that the tapir is not to be found north of the Isthmus of Darien—an assertion entirely false, as the tapir is not only found in Costa Rica, but as well in all others of the Central American republics.

There is nowhere on the Spanish-American coast from San Diego to Cape Horn such an amount of deep bays and excellent anchorages as on the west coast of Costa Rica—Salinas, Culebra, Elena, Murcielago, Potrero Grande, Coco Brazilito, Juanilla, Uvita and many others. Such are the names of some of the bays, many of them unknown to the outside world and only discovered by the expeditions of which I was a member. These bays are deserted and silent; there are no cities on their shores, and no commerce; nobody lives in their vicinity, and where the water ends there begins a wilderness, inhabited only by wild animals and occasionally by Indians.

But in the midway between the northern and southern extremity of the republic stretches a magnificent sheet of water, dotted, like the Gulf of Fonseca, with many islands. It is the great Gulf of Nicoya, an inland sea, the center of all western commerce of Costa Rica. Here we behold a long, sandy neck of land, the largest maritime city on the coast of Central America—the harbor of Punta Arenas.

Punta Arenas, or Puntarenas, is of a great importance, as from this port is exported coffee, the chief article of commerce of Costa Rica. Thirteen million pounds of coffee were exported from Puntarenas last year, and only a little over half this amount from Puerto Limon, on the Atlantic. The coffee grows everywhere in Costa Rica, and is the real source of

wealth of the republic—the cities of Cartago, Alajuela, Heredia and the capital, San Jose, being the principal markets in the interior.

Puntarenas is not a beautiful town, though the life here is very pleasant. With the exception of Leon, the Costa Rican harbor is the gayest place on the coast of Central America. The money is easily gained here and easily spent; besides the Costa Ricans never keep any money, and consequently never get rich. They enjoy life as long as they can, never thinking what will be to morrow. They work it is true, but what they gain during the week they spend on Saturday and Sunday. They begin dancing on Saturday evening and end it on Monday morning, with the exception of a couple of hours on Sunday, when they go to church. Fandango is the favorite dance of poor and rich, of high and low, and the marimba the principal musical instrument. They love music passionately, and they express always in song their love and despair, their joy and sorrow. At night a gay cabellero takes his guitar and goes under the window of the house where his lady-love lives. He begins then to play and to sing, imploring his goddess to show herself and to give him a few words of consolation. Of course he usually gets what he wants, and very often is even allowed to kiss a small white hand, or he gets a flower from the lady he loves, or even a cigar! The ardent lover is then satisfied and he goes home like a conquering hero.

The young ladies of Costa Rica, especially those of Spanish origin, are like their sisters of other republics, very pretty, often beautiful. They have the most magnificent black liquid eyes, and remarkably small feet and hands. Their complexion is very fair, though they spoil it often by using too much rouge and poudre. At the age of twelve they are often married, at twenty-five they are grandmothers, and at thirty they are counted already as "the old ladies," though there are many exceptions when the ladies preserve their beauty to a very old age.

The ladies seldom dress after the European fashion, but preserve their old and beautiful Spanish mantillas. The black lace and *crepe* play also an important part in their dress. The ladies of good families very seldom show themselves on the streets, except when they go to church; besides the young senoritas never go alone, but always in company with an elderly matron or *duenia*. They flirt, however, whenever they can, but they are true to their lovers, and make excellent wives and mothers.

South of Puntarenas there are no villages or cities until we meet the great Gulf of Dulce. This immensely deep body of water forms the southern boundary of Costa Rica, for a little further beyond the Burica point Central America ends, and begins, politically speaking, South America.

On the shores of the Gulf of Dulce, on the very verge of the tropical forest, there dwell a few families, forming the community of Santo Domingo. I lived with them five weeks, and a curious life it was. Scarcely anybody ever visits this remote corner, and the inhabitants do not know anything about the outside world. Only occasionally they send a boat to Chiriqui, in the United States of Columbia, to bring thither hides and to fetch back what is necessary. There is no school and no church in Santo Domingo, and with the exception of "jefe politico," nobody can read or write. But, dance they can, and

even here they have their marimba and their fandango. They are hospitable, primitive, and sometimes very *naïve*. Seeing me collecting plants and insects, they took me for a physician, and never could I persuade them that I did not know anything about medicine. Another time I was sketching and their "jefe politico," who heard something about photography, told them that I could take their pictures. Of course everybody wanted to have one, and in vain I tried to persuade that sketching and photographing were two different things altogether. They would not believe me. Finally, in despair, I sketched the portrait of the "jefe politico," but in such an ugly and unflattering manner that the inhabitants were terror-stricken and did not wish any more pictures. As for the "jefe politico," I am sorry to say that he never could forgive me, for he prided himself to be the handsomest man in the village, a regular Don Juan of Santo Domingo.

East from the Gulf of Dulce, in a wild and unknown territory, dwells a curious tribe of Indians, the Talamancas. They are fierce and warlike and only nominally christians. The Spaniards never could conquer them, and they are even now an independent tribe. They live in so-called "palengues," large adobe buildings, which contain many families. In fact, their system of community is remarkably similar to that of the Zunis in Arizona.

In the northern extremity of Costa Rica, near the Lake of Nicaragua, are to be found Guatusos, the only white tribe of Indians in America. Of course, they are not white in our sense, yet they are remarkably fair as compared with other Indians. They live only in dense forests on the banks of the rivers, and never expose themselves to the rays of the sun—a fact which accounts for the fairness of their skin.

Costa Rica has more white inhabitants than any other republic of Central America, the total population not exceeding 300,000. Independent since 1821, Costa Rica formed from 1824-39 a part of the Central American confederation. The president is elected for four years. He is assisted by two vice-presidents who are elected annually by the congress. The congressmen are elected for four years, but one-half retire every two years.

The Andes of Costa Rica are much higher and more stupendous than those of Nicaragua. They form an immense plateau in the interior, with mighty peaks and volcanoes, and terrific ravines and arroyos. They would be terrible in their gigantic dimensions if they were not so radiant and green. The freshness of nature takes the gloomy aspect from them and covers the Cordillera with a veil of grandeur and beauty. The most prominent peaks are—the mighty but regular Orosi, the fantastic Turialba, and the terrible volcano of Irazu, whose immense cone hangs like the sword of Damocles over the fair city of Cartago.—*M. Lopatecki.*

An industrial journal gives the following valuable information: A one-inch shaft running one hundred revolutions per minute will transmit one horse-power; a one-inch shaft will stand the force of fifty pounds at the end of a crank one foot long. A one-inch belt running eight hundred feet per minute will transmit one horse-power. A one-inch wrought iron rod will support seven thousand pounds, and a two-inch rod four times as much.

Clearing Land in San Diego County.

EDITOR OF THE SAN DIEGO MAGAZINE:—We promised to tell the *Semi-Tropical Planter* how we cleared the land of sumac, but think it better to tell the SAN DIEGO MAGAZINE how we did not clear the land of this "cumberer of the ground."

The old method of cutting off and burning the tops, leaving the roots to sprout is too slovenly. While grain does very well in a wet season, the shoots must be cut each year. Indians and Chinamen grub too slowly. Our nearest neighbor removes the soil from one side, introduces a crowbar on the other side and raises the whole plant, root and branch. It looked very easy, (our neighbor is very strong) it was expeditious; we were so much pleased, a crowbar was procured with the determination of clearing 40 acres in five days.

The next morning bright and early, the ground being soft, we proceeded to work, concluding to try a small root. The soil was removed from one side, the crowbar placed in position, and with very little effort the roots were raised. The same process was tried upon another with the same result. We were elated; it was just fun, as the boys say; after raising two others, concluded to try one of the "old settlers," which appeared upon the surface. About three feet long by one foot wide, a foot of soil was removed from the lower side; the root was found to be larger than anticipated. We dug deeper and deeper till we thought with the bar it could certainly be raised, but the united efforts of the bar and our whole muscular force failed to start the obstacle.

We were now warm; we dug more soil away; felt that we had a back; again used the bar; could not move it; took away more soil—was hot—sweat oozing from every pore—pryed again with the bar, then dug more soil; kept digging and prying, with no better success. Completely exhausted, wished all the sumac in the bottom of the ocean. If there had been any one near accustomed to "cuss words," we fear we should have been tempted to have hired him to use a few. Our neighbor came over the next morning, with the spade cut off a small root here and there, and with the crowbar pryed the whole plant up, just as easily as though it were child's play.

In the future we shall use the old slovenly mode, waiting for an Edison to invent a more expeditious plan. In the meantime, unless we wish the land for vines or trees, the sumac will continue to grow, no matter if the frost cuts it down or if fire consumes its branches, the next season it will be as vigorous as ever; and if some of the shoots are taken out the others will make fair stovewood. It has been our mainstay the past season, the branches making a quicker and hotter fire, although not lasting as long as the roots.

To the newcomer the manner of clearing off the ordinary brush may not be amiss. My neighbor on the east uses a "masher." What a pity that the city street corner "masher" could not be put to such a purpose! The "masher" is made of two-inch plank, about six feet long by six feet wide, put together like the old style cellar steps, and shod with hoop iron. The steps slant from the horses; place a seat on the upper side near the center; hitch the horses by rope or chain, jump aboard, drive over the brush, and from ten to twelve acres can be

made ready for burning in a day. This is rather better than the railroad iron bar, and affords a seat for the driver.

A word of caution to the new settler during the dry season, which is the time the brush is burned more easily than earlier in the season. The uncontrollable fires are a terror to all the old settlers, and will be to all new comers. Too much precaution cannot be taken, besides a heavy fine to the one who starts the fire, the damage to others cannot be compensated. Sometimes a spark from a pipe, the end of a cigar or the match lighting the cigar has started fires which raged violently. Last season two were thus started on the Heights, which took the combined effort of all hands here to keep under control, all of which could have been avoided if the person smoking had used more care.

The outside of the tract to be burned should be raked clean of brush and dry grass, throwing the whole towards the center of the tract, till 50 to 100 feet have been cleared all around the piece, over which we have never heard of fire jumping. Before the ground gets too hard if ten to twelve feet wide is plowed around fences, houses, or stacks of grain, it will prevent the spread of a fire. Better perhaps to plow now and keep the space clear of weeds by cultivation.

The subject is of so much importance that when the dry season begins words of caution should be given by every paper in the county and throughout the whole State.

From my lofty seat, surrounded with flowers of every hue, I look down in the Cajon valley and see the mowers laying the barley low for hay. On the other side the click of the machine is heard cutting the wild oats from the rounded adobe hills of Spring valley. These hills have grown crops of oats as long as any one can remember, and this year's crop will be as large as any preceding. The wonder is that no plow has ever turned the soil and no man's hand ever sowed the seed. When the wild oats are cut early stock of all kinds like it; but if too ripe the oats rattle off from the stalk, and are so full of hard beards as to injure the mouths of many horses. While adjoining lands are covered with sumac, buckwheat and brush of all kinds, acres upon acres of wild oats wave their graceful heads to the passing breeze, where no brush of any kind has ever been seen; and to-day these fields are as beautiful as the great wheat fields of New York State were forty years ago.

El Cajon Heights, April, 1888.

GEO. C. SWAN.

Dr. W. H. Dallinger, F. R. S., says that "the researches of science are physical." The observable finite contents of space and time are the subject of its analysis. Existence, not the cause of existence; succession, not the reason of succession; method not the origin of method, are the subjects of physical research. A primordial cause cannot be the subject of experiment, nor the object of demonstration. It must forever transcend the most delicate physical reaction, the profoundest analysis, and the last link in the keenest logic. Absolute knowledge concerning it can only be the prerogative of itself.

M. P. Ledebøer asserts that the magnetic properties of iron are unaffected up to a temperature of 1100 degrees F., beyond which they are rapidly lost, becoming scarcely perceptible at 1350 degrees. They return in the same way as the metals cool.

The Stamps of Switzerland.

BY J. WHITEMORE HALSEY.

Switzerland is a federal republic, composed of twenty two Cantons, or small States. For the Cantonal Administrations of Zurich, four queer stamps were issued in 1843, homely in design, but any collector of to-day is considered fortunate if he possesses a genuine specimen. There were two values—4r. black and 6r. black—and these were also issued with horizontal lines in red, making the four varieties. The design is briefly detailed as follows:

A large numeral in the center-ground, worked by numerous lines—above, in narrow label or oblong "Zurich;" below, in same, "Local Taxe," and along the sides, various grace lines representing leaves.

Later, in 1849, a new stamp, of an entirely different design, was issued, and I will endeavor to roughly describe it to you. A cross, in oval of black, formed the center; while just below was a slim, curved post-horn, under which was the following inscription, "Rtspost poste locale;" in upper left hand and lower right hand corners, a letter "r," and in the other two the figures "2½." The central design was suspended by a few cords, and the whole with the exception of the corner inscription, seemed to be in a shield. This was the last issued by that city.

GENEVA.

The above city issued six different stamps, more than any of the other Cantons. Geneva is the metropolis of Switzerland, and its jewelry has a world-wide reputation.

In 1843 appeared the queerest of all the Cantonal stamps, and at a glance one would take it for an unsevered pair of stamps; but on closer examination the design appears to me to be as follows: Two squares, separated by a single vertical line above, in long oblong, the inscription: "10 Post Cantonal Cent." The design, of each of the squares are, as near as I can see, alike in every particular. The design is odd, and I will endeavor to give a description of it. A shield, crossed at the top by an unrolled strip on which is inscribed "tene bras," and "cr." near each end, above is what might be intended to represent the sun. A little to one side and inclining, are the words: "Poste Genève." Below, the shield is, "Post local," and at sides, "5c."

The shield itself is divided in half; on the observer's left is griffon, with outstretched wing and groundworked with dots. It is not unlike the emblem of Lubeck. On the observer's right is the standard emblem of Bremen, that of a key groundworked by vertical lines. This completes the design.

In 1845 the same design was used, and the color changed to yellow-green. In 1847 a variety of the same design was issued, and in 1849-50 the variety appeared on white paper and dark green. The envelope stamp is the same as the last, adhesive. These Cantons are exceedingly rare, and it is in only large or valuable collections they are seen, and are seldom (if ever) offered for sale at public auctions. It would be advisable, if any collector possesses any, to "hold on to them," as the saying is.

BASLE.

The most beautiful design of any of the Swiss Cantons is by far that issued by the above city in 1845.

The design is as follows: A dove represented as flying and

carrying a letter, is the central design. It is surrounded by a double-lined shield in whose lower half are the words, "Stadt post Basel." In the left lower corner is the figure, "2½," in the right lower corner "rp." A few lines at the top and the ground-work outside the shield completes the design.

VAUD.

This State issued, in 1849-50, two very beautiful stamps, of the following design: A cross, inclosed in a circle, formed the center-piece; above, in label, "Poste local," and below, the numeral value. Under the center-piece was the post-horn and a profusion of gracefully represented leaves branching outward and reaching almost to the margin of the stamp, completed the design. There were two values, namely 4ct. and 5ct. These, like the rest, are rare and interesting.

NEUCHÂTEL.

This is the last of the stamp-issuing Cantons, and it issued but one stamp as late as 1851. It is of a somewhat elaborate design, with the cross in the center, surrounded by two bracks; above is "Foste locale," and below, "5 centimes." The ground-work consists of numerous interlacing lines, which makes the center-piece appear quite prominent.

I have finished with the Swiss Cantons. It has been my endeavor to furnish the collector with a description of each, and when they were issued, together with a little information about them. If a single reader has profited by anything I have here given, I will consider myself doubly repaid for my work. Now let us take up the general issues of the Federal Administration.

In 1850 a set of four stamps were issued, with a design that bears so much similarity to the one described under the last Cantonal State that it would be practically a waste of time to give a minute description. The two last values, 5r. and 10r., are printed in three colors, the 5r. in blue, red and white, and the 10r. in yellow, red and white.

In 1852 the same design was used, but heavily outlined and a new value, 15r. in red, issued—of which there were three varieties.

An entirely new design made its appearance in 1854, and from thence to 1862 different values were added, making in all seven varieties, of the following values: 2r., 5r., 10r., 15r., 20r., 40r. and 1 franc. These designs, nearly all are quite familiar with; but supposing some are yet in ignorance, I will burden you for one short minute with a description:

A female figure, seated and upholding a spear with her right hand, while her left arm rested on a shield, on which a cross is engraved; above, in oblong, is the word "Franco;" below, in the same, is the numeral of value, and the word, "Rappeu;" at the sides is also the numeral of value, and "centimes," inclosed in oblong. A small star in each of the corners completes the design.

From 1862 to 1882, or about twenty years, this design, or rather the design with the wording changed somewhat, was used, and four new values, 25f., 30f., 50f. and 60c., were added to the set, which, when complete, is very beautiful.

In 1882 a new set, six in number, was issued, of a new design. A cross in center, the value in a shield below; above, in curved label, "Helvetia," and above that, in fine type, the word "franco;" at the sides, also in equally fine print, was also the same; the border consisted of a number of squares. The

values of this set were 2f., 3c., 5c., 10c., 12c. and 15c.

In this same year also appeared the most beautiful set Switzerland has ever issued. A female figure, standing with her hand resting on a shield, and carrying a spear, forms the center-piece; a frame encloses it, in which are numerous stars and the word "Helvetia." The value is in the two upper corners, and also at the base in large type. Branching from thence are two strips, on which are the word "franco;" this completes the design. The values are 20c. orange, 25c. green, 40c. gray, 50c. and 1f. pink. These were the last adhesive issued.

The Unpaid Letter stamps are peculiar, and great difficulty is experienced by the young collector in ascertaining under which country they belong. The design consisted of a numeral, surcharged in black in the center, surrounding which is a circle inclosing twenty-two stars, or one for each Cantonal State; outside is a square, in each angle of which is a small design. This completes the pattern, and it can be easily seen why young collectors are ignorant for some time of their nationality. In 1883 they appeared printed in green and carmine, and make a very beautiful lot.

Envelope stamps were first issued in 1867-8; the design of the first set of four varieties is quite beautiful; it represents a bird, flying; below is a shield with a cross as a central piece, around which are entwined leaves; the value is below in quite large type, and around the outward margins at each side are eleven stars; a circle inclosing the whole completes the design. The values and colors are 5c. brown, 10c. rose, 25c. green and 30c. blue.

In 1871 two more envelope stamps were issued, the numeral in center with cross above; "centimes" below—a wreath incloses them, and below, in unrolled strip, was 20. 3. 71. A small post-horn in each corner completed the design.

The Newspaper Band Stamps are six in number; the design consists of a large numeral of value in the center; above, in shield, is a cross; the groundwork is what is called a Greek border; and twenty-two stars complete the design, which is inclosed in an oval frame.

The Green Turtle.



The best known of all the turtles is the celebrated Green Turtle (*Chelonia viridis*), so called from the green color of its fat. This useful animal is found in the seas and on the shores of both continents, and is most plentiful about the island of Ascension and the Antilles, where it is subject to incessant persecution for the sake of its flesh. The shell of this reptile is of very little use and of small value, but the flesh is remarkably rich and well-flavored, and the green fat has long enjoyed a world-wide and fully deserved reputation.

The eggs of the turtle are thought as great delicacies as its flesh. It is while the female is visiting the shore for the purpose of depositing her eggs that she is usually captured, as these sea-loving reptiles care little for the shore except for this purpose.

[The above illustration and notes on this interesting species are from Wood's Popular Natural History.—EDITOR.]

Flavor of Pork.

There is, as far as we know, no distinctive flavor possessed by any breed of swine to the exclusion of other less favored breeds; and well may we say, without fear of contradiction, that our pork is exactly what we make it; and as the wheat-fed product of Dakota is superior to the corn-fed pork of the Mississippi valley, that is superior to the slop-fed village porker; and it becomes an established fact that we can produce pork of whatever flavor we desire. The canvas-back, that feeds upon the wild celery along the creeks, rivers and bay, just north of Baltimore, have long been prized above all other ducks, simply because of the peculiar and delicate flavor given them from the celery upon which they feed; and only a short time since we had the pleasure of assisting to pick the bones of a capon that had been fattened upon wheat, rice and celery. Of all roasts that I have enjoyed since I first partook of canvas-backs in dear old Kent county, Maryland, it was the best. I was immediately transported in imagination, as never before, to the ideal of the gormand, as prepared by "Aunt Chloë," for "Massa Frank," the torment of "Old Chloë." Long since she has been called to her fathers; but I never partake of a delicious dish that kind thoughts of the kind-hearted old darkey do not steal over me. Whether it was the large celery marsh or Aunt Chloë's skill in the "art profound" that produced the entire effect, I shall not attempt to say; but will only say "she did not live in vain."

Whilst the meat of the black breeds are much firmer than that of their white kinsmen, all can be equally improved by greater care in the selection of their food; and in no State could a finer variety of pork be produced than could be in California with the refuse of your many fruits and berries. The flesh of the hog could be so modified that it would be unrecognizable by any but the expert. Let us of the East and West, move in the matter and convert our much abused porker into a delicate morsel for the palate of the epicure.

Brilliant, Ohio.

TRIXIE.

Advertising.

Southern California is at present being extensively advertised by the Eastern press in a way objected to by the press of this section. Yet, it is a most effective way, and one which will prove of vast benefit to the Pacific Coast. It tends to discourage a class of unenterprising, shiftless fellows, who will henceforth stay in their grandfather's tracks, and congratulating themselves on not having been "took in" by the California "boom." This is in itself a blessing to California. We do not want that class of inhabitants; but we have to thank representatives of that class for this gratuitous advertising of our State.

Statements made in favor of Southern California have been widely published, and these statements are strongly backed by truth—by facts which any enterprising stranger can easily verify. Statements intended to injure our prospects are backed either by utter falsehoods or half-truths. The rapid development and building-up of Southern California has been the direct result of the first, backed by the truth. This development of our remarkable natural resources will continue as an indirect result, in part, from the statements backed by falsehoods and half-truths in the reaction sure to follow, by the energetic learning the whole truth for themselves.

NATE CHAUNCEY'S LUCK.

Nate Chauncey was the son of a country merchant, well-to-do in this world's goods. He was an intelligent boy, and the pride of his parents. At the time I am writing he is about sixteen years of age. Soon after Nate's fifteenth birthday his mother fell sick and died. Her death completely prostrated the aged father, who was never himself again. When the estate was settled, and his father's affairs looked up, they were found in a bad condition. After all debts were paid Nate found he had his aged father to support. The dwelling-house was sold for a few thousand, that being all that was left of the property of Silas Chauncey; and a small cottage was purchased in the suburbs of Mobile.

Nate was one day looking over a newspaper when he came across this singular advertisement:

For every one million postage stamps, I will board, clothe and educate an orphan until old enough to support itself. Also for every one million postage stamps sent me, I will find a home for either an old lady or gentleman, in either New York, Cincinnati or London, and pay all expenses, etc., etc.

Stettin, Germany.

IGNEZ.

Nate was astonished, and perused the advertisement over several times before he could collect his thoughts. He would now find a home for his father, he thought and it would be comparatively easy. Nate's father, when in business, was in the habit of sending and receiving large numbers of letters, and had saved them all. Nate knew it, and immediately betook himself to the garret. He then commenced to search for stamps. By night he had found nearly three thousand, which consisted of a good many different kinds. Among them was one on a slip of thin paper about two and a half inches long by nearly an inch in width, and on it these words were printed, "James M. Buchanan, 5 Cents." Now Nate had never seen one like that before, and he thought it was a queer stamp; but he put it among the rest and put them away for that day. The next day he planned to go to the neighbors and ask to look over all old letters, etc. That day he found many stamps; many that he had never seen before. The next day was Sunday, and while he was reading the *Sunday World* he read of a great postage stamp swindle by a dealer in Stettin, Germany. That was the place to which he was to send the stamps; but now he was thankful that he had not found any more stamps than he had, and that he had not sent them. The next day while at school he told his singular experience to the boys and the teacher. Now the teacher happened to be a stamp collector. He offered to buy Nate's stamps, and promised to come over to look at them and make him an offer. The short and tall of it was that he found numbers of rare stamps among them, and being honest, he told Nate what they were worth. Nate lost no time in telling his father of his good luck, and before another new moon Nate had a bank account of \$2,000 and a promise of more from the teacher as soon as the remainder of the stamps were sold.

W. L. BABCOCK.

During the first three months of 1888, Book Chat has indexed 524 new American and English works, reviewed 124 new books, indexed 3,627 magazine articles contained in 799 periodicals, and noted 145 French, 115 German, 34 Spanish and 52 Italian books.—Brentano's Publishers, 5 Union Square, N. Y.

Among the Magazines.

Mr. George Kennan will tell in the May *Century* how he came to go to Siberia on the *Century* expedition. Mr. Kennan had spent some time in Siberia already in connection with the overland telegraph scheme, and in the summer of 1884 he made a preliminary excursion to St. Petersburg and Moscow for the purpose of collecting material, and ascertaining whether or not obstacles were likely to be thrown in his way by the Russian Government. He returned in October, fully satisfied that his scheme was a practical one. He therefore sailed from New York to Liverpool in May, 1885. He says: "All my prepossessions were favorable to the Russian Government and unfavorable to the Russian Revolutionists." He adds that this "partly explains the friendly attitude toward me which was taken by the Russian Government, the permission which was given me to inspect prisons and mines, and the comparative immunity from arrest, detention and imprisonment which I enjoyed, even when my movements and associations were such as justly to render me an object of suspicion to the local Siberian authorities."

John Burroughs writes in his usual entertaining way of 'Hasty Conclusions in Science,' in *The Chautauquan* for May. The May issue of *The Chautauquan* contains an outline of the work to be done at Chautauqua in the coming summer. It is an attractive and strong outlook. At least one new department of promise will be introduced, the Chautauqua School of the English Bible. The Teachers' Retreat and the College of Liberal arts are strongly manned; the list of lecturers for both July and August fairly bristle with great names; and the entertainments and music include a large variety to meet both popular and classic taste. The good judgment, the fine culture and the popular 'touch' which have always characterized the arrangement of the Chautauqua programs are fully shown again this year.

Newspapers in 1888.

From the edition of George P. Rowell & Co.'s 'American Newspaper Directory,' published April 2d (its twentieth year), it appears that the Newspapers and Periodicals of all kinds issued in the United States and Canada, now number 16,310; showing a gain of 890 during the last twelve months, and of 7,136 in ten years.

The publishers of the Directory assert that the impression that when the proprietor of a newspaper undertakes to state what has been his exact circulation, he does not generally tell the truth is an erroneous one; and they conspicuously offer a reward of \$100 for every instance in their book for this year, where it can be shown that the detailed report received from a publisher was untrue.

How to Carve a Fowl.

The Arabs know how to carve a fowl without having the bird migrate all over the table and finally land in the lap of one of the diners, says a traveler. Five Arabs seat themselves around a large bowl of rice surmounted by a fowl. Two seize the wings with their fingers, and two the legs, and simultaneously tearing these off, leave the carcass to the fifth. It must be a bad omen to have six men at the table when the fowl is carved in this fashion—that is, bad for the sixth man, if he is fond of fowl.—*California Cackler*.

Giants Among Small Things.

Were we to write of the geological predecessors of the existing species, volumes would be required to produce anything like an adequate description. Two examples from the past, however, will be better than none, and may induce the reader to delve more deeply into the mysteries of that fascinating science, Geology.

The lobster of the present era, as commonly seen, does not exceed five pounds in weight, and is oftener less; though when arrived at full maturity their weight is about ten pounds. But going back countless ages to the early Devonian era, we behold what may truly be termed a prince of lobsters. This giant crustacean, which is called *Pterygotus*, attained the length of six feet and was two feet in breadth. Its antennæ were armed with powerful claws, and in many ways did it possess double advantage over its modern congener. It possessed two pair of eyes—a large pair on the front of its head and a smaller pair on the top. For perfect mastication it was provided with four pair of great serrated jaws. On each side was a powerful paddle, enabling it to swiftly pursue its prey; while if attacked by any predaceous superior, it could, by striking the water with its broad tail, retreat with the rapidity of an arrow.

The Triassic period furnishes another example in a species of frog, which sometimes attained a size fully equal to an ox. No complete remains of the *Labyrinthodon*, as it is called, have been found, but enough to fully establish its character. The mouth was furnished with numerous rows of small but closely set teeth, and from this fact it derives its name.

Conchology is not supposed to be replete with gigantic specimens, but in the archipelago of the Molucca Islands such specimens are by no means rare. Here the *Tridacna*, sometimes weighing five hundred pounds, fasten themselves to the rocks and can only be cut loose with an axe. Their thick shells, five feet long, are used by the natives as bath tubs, ready cut and polished by nature.

Another mollusc of prodigious size is the cuttle-fish. One seen near the Canary Islands had a spread of arms of twenty feet, and weighed over four thousand pounds.

A variety of sponge, known as Neptune's Cup, grows on the submarine rock, from three to six feet high. Their small stock and wide top, symmetrically hollowed out, is an almost exact representation of a colossal drinking goblet.

The marvelous delicacy of organization and still more marvelous intelligence of insects has always been a cause of wonder and a source of admiration, and in this class also, we find extremes of strength and size. One species, the Goliath of Drury, is much larger than many kinds of our more common birds, which it would pitilessly strangle and devour, were it in his power to capture them. This entomological monster is, from the extremity of the abdomen to that of the mandible, four inches long, and is one-half as broad, and armed with its strong bony coat of mail, it well deserves its name. The *Mormolyce*, though measuring three and one-fourth inches in length, is not a powerful insect, and its source of protection lies in the resemblance of its green wings to the leaf of the plants among which it lives. The antennæ are nearly three inches long, making its extreme length about six inches.

A species of butterfly exists in South America, the body of which is as large as that of a robin and its velvet wings, ornamented with the most gaudy coloring, extend a foot across.

Many spiders of the tropical world have a body three inches long and the circle of their legs six inches in diameter; and one species on the Amazon is five inches long. Some of these giant spiders are extremely active and will attack small birds and strangle them in their nests. One species quite numerous in Columbia, sometimes fasten on the neck of chickens and pigeons, seizing them by the throat and killing them instantly. Others of these spiders obtain their prey by weaving webs so strong that the large butterflies and small birds, even, become helpless victims. Though in the temperate zone spiders are of repulsive appearance, numbers of those of the tropical world are radiant with the shine and metallic lustre of many and varied colors.

In the botanical world the leaves and flowers of plants generally attract us by their symmetry and regularity of outline, or the beauty and harmony of their color and their delicate but pleasant perfume. But if we transport ourselves again to the Amazon we find there the leaves of the *Victoria regia*, which display themselves upon the surface like immense plains of verdure. These leaves are nearly circular and from eighteen to twenty-five feet in circumference. The upper surface is of a uniform and beautiful green; thus, when seen from a distance, presenting the appearance of floating tables covered with velvet. The frame work of these leaves is so strong that a child can float on them, and they are nightly used as a cool resting place by the many aquatic birds of that region.

The leaf of the great talipot palm which grows in India is so large that under its vast cover forty persons can shelter themselves. The leaf of this tree is sometimes fixed to the ceilings of museums of natural history, one leaf covering it completely.

The flower of the remarkable *Victoria regia*, the leaf of which has been referred to, was long considered the largest in the world. These brilliant rose and white blossoms often measure a yard in circuit and emanate a pleasing fragrance.

But the flower of the gigantic *Rafflesia Arnoldi* is a perfect monster of vegetation and leaves all others far behind. On account of its mammoth proportions, botanists for a long time refused to believe the existence of such a flower, and it was not until a specimen was sent to London and there examined that all doubts were dissipated. The flower is composed of a fleshy mass weighing from twelve to fifteen pounds. "Its border, the circuit of which is not less than ten feet, shows five lobes, forming a gaping excavation capable of holding a dozen pints." Its odor is unpleasant, having a carrion-like smell. In Sumatra and Java, where it is found, the natives almost make a divinity of it and clothe it with a supernatural power.

But while the ignorant savage of the mighty works of nature creates a divinity, the naturalist recognizes in them the manifestation of an omnipotent Creator, whose works and wonders are everywhere displayed to the observing mind.—*Chas. D. Pendell.*

Epoch of the Mastodon in North America.

The most interesting of the animals that have recently, (in a geological sense), become extinct, is probably the American Mastodon, (*Mastodon gigantes*) which, in connection with the Mammoth, or fossil Elephant, (*Elephas primigenius*) appears to have attained a great numerical development upon this continent at about the close of the Pleistocene, or the commencement of the Post-tertiary epoch. Geologists are enabled to determine with certainty the age at which these colossal herbivorous animals existed in this country, from the circumstance that their bones are found in a partially petrified or sub-fossil state, in superficial deposits, lying above the drift formation, as for example in peat-bogs or the mud and marl deposits of existing ponds and lakes, the origin of which, it seems, cannot extend far back of the introduction of man upon this continent. Some have thought that the mastodons and mammoths did not become entirely extinct in this country until after the advent of man, and find a support for their opinion in various traditions of the North American Indians, which represent their ancestors as warring against certain colossal animals, which are described as tree-eaters, and as never lying down, but leaning against a tree when they slept. Sir Charles Lyell, however, after a review of all the facts in the case, has arrived at the opinion that the period of the extinction of the mastodon, although geologically modern, must have been many thousand years ago. Judging from the distribution of their bones, the mastodons appear to have existed most numerous in the valleys of the Ohio and Mississippi, and from thence to have roamed as far to the northeast as New York and New England. Their remains, however, have been but rarely found in New England, and it has been conjectured that the Hudson river may have acted as a barrier to their migrations. The mammoth, or fossil elephant, appears to have roamed over the same territories contemporaneously with the mastodon, but in much smaller numbers. In the Western States the bones of these animals are found most commonly in the low places around the salt-lick spots, that are still frequented by deer and other wild animals that come to lick up the saline waters. At one such locality in Kentucky, known as the "Big Bone Lick," about twenty miles southwest from Cincinnati, it is estimated that the bones of 100 mastodons and 20 mammoths have been dug up, together with the bones of the megaloryx, buffalo, deer and other animals. The most complete skeletons of the mastodon have, however, been found in swamps and peat-bogs, in which the animals were probably accidentally mired and suffocated. The finest and largest skeleton in existence was discovered by some laborers engaged in digging marl from a swamp in Newburg, N. J., in the summer of 1845. It occupied a standing position, with the head raised and turned to one side, and the tusks thrown upwards the position natural to a quadruped when sinking in the mire. In the place where the stomach lay, and partially enclosed by the ribs, there were found about seven bushels of vegetable matter—i. e., bruised and chopped twigs and leaves—which, without doubt, represented the food last eaten by the animal. Some of these twigs, subjected to microscopical examination, proved to be those of a coniferous tree, probably the white cedar. This skeleton was purchased by the late Dr.

John C. Warren, of Boston, and is now preserved in that city. Its dimensions are as follows: Length, twenty-five feet; height, twelve feet; length of tusks, ten feet. The total weight of the bones is 2,000 pounds, and so slightly changed are they that they still retain a large proportion of their animal matter. In some instances there have been found in connection with the skeletons of the American mastodon, tufts of hair of a dun-brown color, varying in length from two to seven inches—thus indicating that the animal, like the Siberian mammoth, might have been fitted to endure a climate considerably colder than that in which the present elephant lives. G. D. STORY.

Cartersville, Mo.

Opuntia Fruit as an Article of Food,

One of the most attractive fruits in the markets of Mexico, and one that is always in demand is the fruit of the *Opuntia*, or *Tuna*, as it is known to the Mexicans. Both the foreign and native inhabitants consume it, and with many it forms the principal article of food for months in the year.

The seeds of some of the choicest varieties sold in the markets of Mexico were obtained and are now being grown by the U. S. Department of Agriculture for distribution in localities suited to their cultivation. The *Tuna* of the Mexicans must not be confounded with the *Opuntias* found in Arizona, New Mexico and Southern California, the fruit of which is not utilized.

What is known as the cactus belt of Mexico furnishes many very fine species of *Opuntia* adapted to cultivation. When brought together, and each variety receives a name, as other cultivated fruits are distinguished, they will severally be sold and esteemed for their respective merits. Then especial growers of this cactus will appear and new varieties be produced by cross-fertilization and other means as in our northern fruits.

The potato and tomato when first introduced were little valued because their qualities were unknown; now the world would not care to do without them. When man utilizes the *Opuntia* then that fruit will be prized wherever known.

CULTIVATION.

Scarcely a plant known to man requires so little care in its cultivation as the cactus. It will grow in nearly any soil, but best in light sandy or gravelly combinations. The *Opuntia* reaches the greatest perfection on the table-lands of Mexico, where owners of estates have assured me that they have realized beyond all expenses \$3,000.00 to \$5,000.00 annually from the sales of this fruit and its products.

The *Opuntia* takes root readily when a piece of a plant is laid on the ground, or a little soil may be thrown on the top of a joint, so easily is it cultivated. It will stand considerable cold, and drought does not effect it beyond causing the plant to wilt at times, from which it quickly recovers. The dryness during the most protracted drought seems to increase the sweetness of the fruit.

Give the *Opuntia* one-tenth of the care in its cultivation that the peach requires and it will repay you with a delicious fruit that lasts for a much longer period for market; one better for shipment; one with good keeping qualities. No insects to molest it, no dangers from frost, as it blossoms after the time of frost, and protected from thieves by its spines, you can enjoy

its fruit unmolested. There are some who dislike all forms of cactus because of their spines, and consider them useless, but this is a mistake. All cactuses are useful to animals and birds and may be utilized by man, and the spines simply prevent their rapid destruction by animals that would greedily devour these succulent growths were they not protected.

REMOVING THE SPINES.

When the fruit of the *Opuntia* is ripe the fine spines upon their surface are readily removed by taking a bunch of grass or any other suitable thing and switching the fruit, thus removing easily the downy spines, which if not removed would cause a little pain for a short time in handling the fruit. I have seen persons born among the *Tunas* catch the fruit suddenly near the summit and wrench them off with their fingers apparently without suffering any evil consequences. If the spines are not removed at gathering the fruit will have to be wiped before the rinds are removed to prevent pain to the operator.

GATHERING THE FRUIT.

There are three methods resorted to in gathering *Opuntia* fruit: one, with the hands; second, by wooden tongs; third, with a knife. The first method can only be resorted to when the plants are low, or in gathering from the lower branches of a tall plant. By taking hold of the fruit with the fingers and giving it a sudden twist it is at once detached. This is no doubt the best method of gathering for market, as there is less bruising, and if the spines were previously removed can be at once packed for market or the "jackets" removed for immediate use. The second method of gathering the fruit by means of wooden tongs is, so far as the writer knows, only resorted to by Indians, who gather for their own consumption.

The knife in the hands of an experienced gatherer can be made to detach a great quantity of fruit in a day. It is much used along the table-lands of Mexico on the great estates where the *Opuntia* grows to perfection; and the fruit by various means rendered profitable to the owners. The blade of the knife is made of steel and is inserted into the split end of a long strong stick, the length of which enables the gatherer of *Tunas* to reach with the knife blade the joints bearing ripe fruit. The plants are often eight to fifteen feet high. The fruit is arranged around the outer rim of the joints, so, when the gatherer brings the knife blade to the joint he separates by a quick turn that part bearing the fruit, and as quickly thrusting the blade into the severed part, brings it to the ground, when the fruit is soon denuded of its fine spines and removed. Plants present an odd appearance after the terminal joints have been thus removed, but suffer no injury and the fragments readily take root and form new plants.

REMOVING THE SKINS FROM THE FRUIT.

It is surprising what a quantity of fruit can be deprived of skins and prepared for the palate by one pair of experienced hands. A thin slice is removed from each end of the fruit; a slit is then made through the peeling along the length of the fruit. The fingers press downward quickly the separated skin leaving the pulpy fruit exposed in a tempting manner. Thus prepared the fruit is one of the sweetest, most nutritious and refreshing of fruits, mealy and juicy, most agreeable for the warmer seasons of the year in the United States. Especially is this fruit adapted for the breakfast-table, when the languid

body needs something to aid digestion. If kept as cool as a watermelon it will prove far more agreeable than that fruit, being of a similar flavor with that of the strawberry added, and it is healthier, more nutritious and longer in season than the watermelon.

This fruit is to be found in the Mexican markets in abundance, and very cheap five months in the year, and is consumed by all classes and conditions of people. Venders are to be seen along all the roads. Along the Mexican Central Railroad the earliest *Tuna* is ripe in June and the latest varieties disappear in November, and you are offered them in small dishes, with the epidermis removed, a thorn from the mesquit tree to carry the tempting morsels to the mouth.

This fruit is finding its way all along the frontier of the United States, and this winter I saw some fine fruit on a stand in Jacksonville, Fla., for sale.

Americans and foreigners consume this fruit with equal avidity with the Mexican and praise the flavor. When as well known in this country as in Mexico it will be utilized to the fullest degree.

DR. EDWARD PALMER.

A Vegetable Garden the Year Round.

A gentleman, having had a fine mansion about completed, asked some friends of his to spend a few hours and come to see his place. After a hearty repast, they walked out to see the surroundings. Their friend had a fine home, on a commanding eminence, with a grand, extensive scenery before them. The grounds around this fine house were bare, and a little farther off, in a hollow, or as some call it, a gulch, was the modest house or cottage of a neat, thrifty mechanic, whose building, though not near so pretentious, had a neat and varied vegetable garden—although it was winter-time in Southern California. He had fine beds of asparagus, cauliflower, red or pickling and Erfurt, also sugar-loaf cabbage, celery, lettuce, beets (which, with the red cabbage, formed a contrast with the green), onions, parsley, peas in flower and all stages, potatoes, rhubarb or pie-plant, which takes the place of the small fruits, as gooseberry or blackberry (being tart), turnip, all of which are hardy, unlike corn, beans, melons, okra, etc., while the tomatoes, until this winter, has been a perennial in this locality. But such is the endless variety that may be grown, month after month, except, perhaps, it is not well to sow the two hottest months; but with plenty of water for irrigating, may be successfully done. But this hard working man managed to have plenty of nice fresh vegetables on his table. What can be nicer than one's own peas, and plenty of them?—good fresh pulled are healthier and better in summer than the heavier diets or meats, especially of cattle fed on wild feed—as home or artificial fed cattle are richer in nitrogenous matters. But I am digressing from my subject.

The wife and children did the weeding and watering of this neat, well stocked vegetable garden, besides a neat well filled floral garden, of which the permanent flowers and flowering shrubs we may mention in our next; also a list of the vegetables that man got in, and garden work of each month in general, in an abstract way; also fruit culture.

M. J. O'BYRNE.

(From the West American Scientist.)

A Few Words About Trees of British Columbia.

The great island of Vancouver, the largest isle on the west coast of America, surrounded by many satellites of smaller order, especially in the Strait of Georgia, and the mainland of the province, compare favorably in respect of forests, to any State, province or county either in North America or in Europe. This great and magnificent province of British Columbia, now brought in communication with eastern parts of the Dominion through the Canadian Pacific Railway, contains such a variety of plants from the magnificent Douglas fir to the modest cowslips that the future botanist of British Columbia, will find here a most luxuriant field of study for his whole branch of science.

The short account of some of the trees and other plants given here is written with the purpose that the numerous readers of the "West American Scientist" may form an idea about the magnitude of botanical life in this remote province. The writer of these lines is but a short time in British Columbia, consequently the account of plants will be found to be very deficient; still the author will endeavor to collect as many facts as possible, either from his own observations or from those of other competent persons, or from facts gathered from the Government Department of Agriculture. As the author has no competent manual under his hands, he trusts, therefore, to his memory for the Latin nomenclature of tree; consequently, shall any mistakes be found, he hopes that they will be excused by the readers, for *errare humanum est*.

In the province of British Columbia the coniferæ are to be found in great profusion. Between them the first place belongs to the *Douglas Spruce*, sometimes called Douglas fir, Douglas pine, and Oregon pine (*Abies Douglasii*) or (*Pseudotsuga Douglasii*), a magnificent tree, often over 250 feet high and 30 feet in circumference, and whose bark is sometimes nine or ten inches in thickness. This tree grows very rapidly, and is distinguished by the woodman into two kinds, yellow and red. The first has a reddish-yellow, knotty heart, and is less durable than the red one. *Pseudotsuga Douglasii* grows mostly in the southern parts of the province, also on the mainland coast and on Vancouver Island, but is not to be found on Queen Charlotte Islands.

Menzies' or Western Spruce (*Picea Sitchensis* or *Abies Menziesii*), very similar to the *Abies Douglasii*, grows chiefly on the coast, and is found also in the Gold and Selkirk ranges. The wood is white, and the tree grows to a very large size.

The *Western Hemlock* or *Hemlock Spruce* (*Psuga Mertensiana* or *Pinus Canadensis*) occurs on the coast, also on Fraser river and the Selkirk and Gold ranges. On Queen Charlotte Islands it reaches the height of 200 feet. Its timber splits obliquely, and decays in the atmosphere, but the bark is very valuable for tanning.

Engelmann's Spruce (*Picea* or *Abies Engelmanni*) occurs in the eastern and interior parts of the province, and forms dense forests in the mountains to the level of nearly 4,000 feet in elevation. The tree is very tall and straight, and the wood durable.

The *Great Silver* or *Western White Fir* (*Abies* or *Picea Grandis*) clings to the coast, but reappears also in the southeast of the province. It is a large tree, but the wood is soft. *Abies* or *Picea Amabilis*, a species most resembling it, grows in the

valley of the Fraser river, and on Silver Mountain, Yale. This tree is in some cases confounded with *Abies Subalpina* or *Mountain Balsam*.

The *Mountain Balsam* (*Abies Subalpina*) is found in the interior of northwest America, in the Gold and Selkirk ranges, in the Rocky Mountains, and in the northern portion of the interior plateau; sometimes in localities nearly reaching 4,000 feet in elevation.

The *Mountain Weymouth* or *Western White Pine* (*Pinus monticola*, and occasionally *Pinus strobus*, var. *monticola*) is found in Columbia River region, and also in the interior of Vancouver Island. It makes excellent masts, and its wood resembles that of the eastern white pine.

The so-called *White-barked Pine* (*Pinus albicantis*) is a small tree, and grows in very great elevation. Not always distinguished from this species is *Pinus flexilis* or the Rocky Mountain Pine.

The *Yellow Pine*, sometimes called "red", and "pitch pine," is *Pinus ponderosa*, var. *scopulorum*. It is a magnificent tree, remarkable for the heaviness of its timber. Its bark is reddish-brown, and half the shaft branchless. It is found in the dry regions of the mainland, and on the slopes up to 3,000 feet.

The *Scrub Pine* (*Pinus contorta*) is a coast tree, and grows on sandy dunes and rocky points. The "interior" variety of this tree, the so-called *Black Pine* (*Pinus Murrayana*) extends further north than any other pine; it covers great areas of poor soil, and sometimes is found on the hills over 3,500 feet high. In the interior of British Columbia the trees are 100 feet in height, but their diameter is only about two feet.

The *Western Cedar*, also called "red" or "giant" cedar, (*Thuja gigantea*) abounds on the Columbia river, on the Gold and Selkirk ranges, along the coast, and also in the northern interior. It is a stupendous tree, sometimes 150 feet high and 15 feet thick, but generally hollow. The wood is reddish-yellow, and splits easily into plank, and is used for shingles. The Indians use it for canoes, and out of its fiber they weave their blankets.

The *Yellow Cypress*, commonly called yellow cedar, (*Thuja excelsa*) grows principally on the coast, also in the interior of Vancouver Island and on the west coast of Queen Charlotte Islands. It is of a pale-yellow tint, and has a strong resinous smell, so that the voracious toredo will not attack it. It is used for ornamental purposes, and also for boats, and the Indians use it for making their carved totem-stick.

The *Red American Larch* or *Western Tamarack* (*Larix occidentalis*) is a noble tree, and its timber is highly valued. It occurs on the interior, on the Gold and Selkirk ranges, and in the Rocky Mountains.

The *Mountain Larch* (*Larix Lyallii*) grows in the Cascade and Rocky Mountains, and forms the last belt of timber above 7,000 feet high. There is a third species of larch in British Columbia. It is the *Black Larch* (*Larix Americana*) which grows in the Rocky Mountains, in the Peace River region. It is a very small tree. The *Juniper*, or Western Red Cedar, (*Juniperus occidentalis*) abounds in the Columbia Valley, on the east coast of Vancouver Island, and also along the shores of the lakes in the interior. The *Common Juniper* (*Juniperus communis*, var. *Alpina*) is found from the Rocky to the summit of the Selkirk Mountains.

Among other trees, valuable as hardwood, the most important is probably the Maple (*Acer macrophyllum*), found on Vancouver and Queen Charlotte Islands, and also on the mainland coast up to 55°. It is a magnificent tree, and grows to a very large size. The *Vine Maple* (*Acer circinatum*) yields strong, white wood, suitable for helves. It is very common in the valley of the Fraser River, on the west coast and on Vancouver Island. The *Torrey* (*Acer glabrum*) grows chiefly on the west side of the Rocky Mountains, about the sources of the Columbia, and on Vancouver Island. The *Yew* (*Taxus brevifolia*) occurs on Vancouver Island, in the vicinity of Fraser River, and sparingly on Queen Charlotte Islands. The wood is tough and of a beautiful rose color. The *Alder* is abundant everywhere in the province. The *Western* or *Red Alder* (*Alnus rubra*) is a large tree in the valley of the Fraser River, and in the coast ranges and islands. The *Mountain Alder* (*Alnus rhombifolia*) is common in the southeast of the province. The *Common Alder* (*Alnus incana*, var. *Virescens*) in the Rocky Mountains, and the *Green Alder* (*Alnus viridis*) in the northern districts of the province. The *Crab* or *Wild Apple* (*Pirus rivularis*) occurs in the valley of the Fraser, on the coast and on Vancouver and Queen Charlotte Islands. Its wood takes a good polish. From the Birch family we find the *Western Birch* (*Betula occidentalis*) very common in the Columbia Valley. The *Dwarf Birch* (*Betula glandulosa*) a small shrub, abundant all over the mainland; and the *Canoe Birch* (*Betula papyrifera*) which grows on Vancouver Island and in the region of the Fraser and Peace rivers. It is used by the Indians for baskets, boxes, canoes, etc.

Except a few small trees, a mile and a half above Yale, on the Fraser, the only *oak* in the province is the Western White Oak (*Quercus carryana*), which is found on Vancouver Island, chiefly in its southeastern part. It is sometimes 70 feet high and three feet in diameter, though many of the trees are scrubby. The *Westering Flowering Dogwood* (*Cornus nuttallii*) is very common in the neighborhood of Yale and around Victoria, Vancouver Island. *Cornus pubescens* is abundant also at Victoria and in the Fraser River valley. The wood of the dogwood, or dogberry as it is sometimes called, is used for inlaying and ornamental work. The *Arbutus* or *Madrona* (*Arbutus menziesii*), sometimes 50 feet high and 20 inches in diameter, is chiefly found on Vancouver Island and neighboring isles; in the vicinity of Victoria, on the Esquimalt road, *arbutus* is very common. It is a beautiful tree, with evergreen leaves and reddish bark. The *Bearberry* (*Arbutus* or *Arctostaphylos uva ursi*) is a small trailing and evergreen shrub, growing in dry and rocky places, chiefly in the northwest of the province. The berries are mealy and form a principal part of the food of bears, grouse and prairie chickens. *Arctostaphylos tomentosa* grows in dry and rocky localities of southern British Columbia and on Vancouver Island.

From the *Poplar* family, the *American aspen* or *Tremulus poplar* (*Populus tremuloides*) abounds in the interior, and also in the north. It reaches sometimes a thickness of two feet. The other varieties of poplar in British Columbia are commonly called the cottonwood. *Populus trichocarpa* is common in Columbia and Fraser River valleys. *Populus monilifera* and *Populus balsamifera* are to be found in the northern and

northeastern parts of the province, and also in the valley of the Lower Fraser.

Herewith I conclude this article on some of the trees in British Columbia. It is only a general outline I give to the readers of the "West American Scientist," though in some future time I intend to furnish a careful description of all plants, if possible, which are to be found in this magnificent province.

M. LOPATECKI.

Editorial.

The inauguration of Horace Davis as president of the University of California took place on March 23rd, 1888, in the Harmon Gymnasium. We acknowledge an invitation to be present—received after the occurrence.

Dr. Edward Palmer, of the Smithsonian Institution, contributes two interesting articles to this issue, which will well repay a reading. We have also to thank him for some seeds of *Cucurbita ficifolia*, *Buche*, from Mexico, where it is much cultivated for its fruit, and is known as the *cidra cayote* or *chidra cayote*. It bears a fruit about a foot in length, somewhat resembling a watermelon in appearance, with a hard outer shell, the contents of a white, fibrous character. It keeps for many months without decay, and one of the finest preserves is made from the inner fibrous portion. Any one desiring to test this new vegetable in this vicinity can obtain a few seeds of the editor for trial, the results of the trial to be reported to this magazine.

From the same source we have a few seeds of *Coesalpinea pubcherrima*, from Batopilá, Mexico, where it is a native. It is described as one of the showiest and easiest cultivated of the plants of that region, and is grown in many gardens in Mexico.

The 1779 Cent.

This cent is deemed by numismatologists as being very rare and valuable; fine specimens of which will command a greater premium than those of the cent of 1793, in the same condition of preservation, to which, from their extreme scarcity, much value is attached. The number of this coin issued amounted to 904,585—no insignificant sum. Their scarcity, however, is attributed to a shipment to the coast of Africa, by a Salem, Mass., firm, of several hundred thousand, on an order from that country, where, being punched with holes, they were bartered away, probably to the chief—certainly not to the negroes—and subsequently used as ornaments by the natives, being suspended from the neck by a string, and showing to what good account so slightly valuable a thing as a copper cent may be applied by the sagacity of our countrymen. Of the few of these cents to be found, it is very difficult to procure perfect specimens. The copper of which they were composed was rendered very inferior by too much alloy, which gave them a very rough and uneven surface—perhaps the result of the copper being burnt in smelting.

The great value of these cents among numismatologists has led to an attempt at counterfeiting them by altering those issued in 1798 by means of acid or the graver—the former being the more successful. Both are readily exposed by the use of a glass.

The Republic of Salvador.

Duly a little over thirty miles south of San Jose de Guatemala begins the Republic of Salvador, the smallest, though the second in point of population of the countries of Central America. The little republic is, indeed the most densely populated country in both Americas, with exception, perhaps, of some of the lesser Antilles, for the Salvadorian Republic contains only an area of a little over 7,000 English square miles, while the number of inhabitants is nearly 800,000.

Salvador was always regarded as a very rich country, and before the conquest was called by the natives "Cuscatlan," or the land of abundance. The country was already at that period very densely populated, and its inhabitants are warlike and fierce. They defended their independence in such a spirit that it required all the energy of such a man as Pedro Alvarado to conquer and to bring them under the Spanish dominion.

Nowadays, though Salvador suffered and suffers still from constant wars and insurrection, the country is fairly prosperous, well governed and the best educated republic of Central America. Agriculture is extensively and successfully practiced, and the export of the products of the country is augmenting every year.

As I leave the shores of Guatemala and approach those of Salvador I remark the difference of both countries. The coast of Guatemala is low and sandy with the mighty chain of the Andes far in the interior; that of Salvador is high and rocky and of volcanic origin. There is no sandy beach here, but the hills descend to the water edge and form a steep fantastic shore, not barren and wild, but green and covered with a crown of the most exquisite trees and parasitic plants.

The first harbor I meet on the coast of Salvador is Acajutla. It is a considerable town as the export place of the north-western part of the republic. It is connected by railway with the city of Sonsonatte, further in the interior, one of the most important places in the republic.

Acajutla looks half like a city and half like an Indian village. The houses as usual are low, but the streets are paved. But what a pavement! I believe that even the streets of San Francisco have a better pavement than those of Acajutla. It is a torment for the poor barefooted Indians to walk on those streets, and even those who use shoes or boots are very anxious to avoid them.

The houses of Acajutla, and especially outside the town proper, form a very curious sight. They are constructed of bamboo or rather coyoles branches and are protected by enormous and very high fences. But those fences are neither of wood, nor of stone or wire, but of cactus. The cactus and especially the giant cardon grows here to an enormous size and very rapidly. Planted around the house in a short time it will grow to a considerable height and will form a most magnificent and durable fence. No animal and no snake can force such a formidable fence and the inmates of the house can rest secure. Sometimes the giant cardon reaches the stupendous height of 60 feet, and when this is the case, you cannot see the house, but only a green and high palisade of tall and prickly cacti.

From Acajutla to La Libertad the shore of Salvador is known under the name of Costa del Balsamo, or Balsam

Coast. It is a magnificent part of the republic, green and fresh, fragrant from the odor of numerous gorgeous flowers, watered by many mountainous creeks, covered with numerous haciendas and fincas. The hills, not too high or too steep, run in soft undulations to the shore, while toward the east they become higher and higher until they meet the principal chain of the Andes. The Balsam Coast itself produces indigo, sugar, cotton, tobacco, coffee and maize, and is of extreme fertility. But the glory of the coast is the famous balsam, known as "Balsam of Peru," which is produced in the woods of this coast in such quantities that over 30,000 pounds are annually exported.

Speaking about balsam, I must mention that under this term we understand now the balsams of Peru and of Tolu. Both balsams have a very fragrant odor and they are used in confectionery, in perfumery and especially in medicine. The two balsams mentioned are very similar to each other in their properties and both are produced by trees of the genus *Myroxylon* or *Myrospermum* of the *Leguminosae*, *Myrospermum perruifolium*, commonly called the *Quinquino*, grows in abundance in Central America, and chiefly from this beautiful tree is prepared the celebrated balsam of the coast of Salvador. *Myrospermum toluiferum* is a very similar species to the former, but grows mostly on the banks of the Magdalena river and in the mountains of Venezuela and New Granada. The mountains of Tolu gave the name to this balsam.

At the end of Costa del Balsamo we meet the fair town of La Libertad, the second harbor on the coast of Salvador. The scenery around the town is magnificent; in fact the prettiest on the coast, for just behind the harbor begin the hills, covered with the most costly woods and with magnificent fruit-bearing trees of the tropics. The cool stream, the river Chillama, runs close to the town; and on its banks the luxuriant vegetation reigns in its supernatural beauty. Over the houses of the town tower the high cocoanut trees laden with fruit, and close to them lingers the graceful curica, papaya, ceiba, henisaro, mata-palo, guayago del monte, guisoyol, mahogany and nispero form dense groups; feathery, delicate leaves of banana and plaintains shine with the color of purest emerald under the glowing sun, and the tall columnar cardon cactus shoots like an arrow towards the blue sky.

The town of La Libertad is a small, delightful place, composed of low adobe houses, surrounded by luxuriant gardens. It is the harbor of San Salvador, the capital of the Republic, and all merchandise destined to that place has to go through La Libertad. The coach runs from the harbor to the capital, which is situated further in the mountains, on a high volcanic plateau.

San Salvador is now a fine and well-built city, though it has none of its former splendor. In 1854 it was a magnificent city, with many churches, palaces and splendid buildings, but on the night of April 16th, of that year, it was completely destroyed by one of those terrific earthquakes which are so frequent in Central America. The city was rebuilt and was again partly destroyed in 1873. It remains, however, always the seat of government and the capital of the republic.

The inhabitants of San Salvador pride themselves on being the most polished and the most cultured in Central America. They read a good deal and study much, and are, without

question, better posted on all social and political questions than are their neighbors of Honduras or Guatemala. The ladies study also a little and willingly discuss all known to them, or unknown questions with anybody who happens to come in their way. With strangers they are free, bold and very anxious to know what the ladies in other countries do, how they dress and how they spend their time. The Salvadorian ladies flirt little more than their sisters in other Spanish-American republics, and are very anxious to marry early. In fact, it is regarded as a disgrace if the lady does not marry. The Salvadorian ladies compare favorably with their sisters in Guatemala or Nicaragua. They are affectionate; generous, but quick-tempered; brilliant, but superficial; vain and vacillating; courageous in the highest degree, but capricious. They like the song and dance, but not so much as the ladies of Leon.

South of La Libertad the coast is very rocky and steep, and contains no harbors until we reach the beautiful gulf of Fonseca. In that magnificent expanse of water Salvador possesses the old Spanish town and harbor of La Union.

La Union has a suffocating climate, for the harbor is landlocked and the fresh sea breeze has no show here. It is burning hot everywhere and you breathe the air of a furnace. Had Charles Dickens been in La Union he would never have described Marseilles as he did in 'Little Dorrit,' for Marseilles compared with La Union would have been an arctic place. Here in La Union everything is hot; the wind, if there is any, the staring dusty streets, the sandy beach, and even the water within the harbor. Scarcely anybody walks on the streets at daytime; everybody who can remains at home smoking a cigar and swinging in a large, comfortable hammock, for the hammock in this *tierra caliente* takes the place of a bed and even very often of a chair.

La Union is a considerable but a very lazy and lifeless place. Only when a fair takes place—and this happens a few times every year—the inhabitants lose their lethargy and are as gay and frivolous as the inhabitants of Leon and Puntarenas. They sing and dance then and make love like veritable children of the sun.

The Andes of Salvador form a highly volcanic central range with no less than sixteen volcanic peaks from four to eight thousand feet high. The volcano Isalco near Acajutla is always in eruption, and the traveler can constantly see the fire and smoke, and hear the roar of ejected lava. Salvador possesses also many lakes and rivers, as for instance the lakes Guija and Llopango and the rivers Lempel and San Miguel. There are many considerable cities and towns in the interior, and among others are Sconatte, Santa Ana and San Miguel. The richness of the country consists mainly of the products I mentioned before, and especially of tobacco, the best in Central America. The mineral wealth is not great, although there are some silver and iron mines near Santa Ana and Tabanco.

The government of the republic is carried on by a president, vice-president and two ministers. The legislature consists of two chambers, an upper one of twelve senators and a lower of twenty-four representatives. The standing army is only 1,000 men, though in case of necessity everybody is called to arms. In the last struggle with Guatemala (1885) Salvador in a short space of a few days had an army of 12,000 men, and what an army it was the battle of Chalchnapa has shown.—*M. Lopatecki.*

Editorial.

A few years before the "boom" in Southern California we remember the enterprise of Chaffey Bros. in founding the town of Ontario, in San Bernardino county, where the corner-stone of the Chaffey Agricultural College was laid March 17th, 1883. The California Press Association, at its meeting on the plains of Ontario at that time, adopted the following resolution unanimously:

"Resolved, That for the generous and liberal hospitality this day extended, we hereby extend our hearty appreciation, and close with the sentiment that we may be spared to return to this spot five years from this date and find, instead of an uninhabited plain, a colony of handsome women and gallant men, living in comfortable homes, beneath their own vine and fig tree, basking in the sunshine of a golden prosperity."

In accordance with the hope above expressed, the Ontario Land and Improvement Company issued invitations March 10th to the Press of California to celebrate with them the fifth anniversary of the colony of Ontario. The engineers' railroad strike prevented our accepting the invitation received; but we are pleased to note that the day was pleasantly passed by the many who were able to be present.

THE inauguration of the National City Water Works was fittingly commemorated the 19th of April at National City. Speeches were made by prominent citizens of National City and San Diego, reviewing the history of the construction of these works from commencement to completion, and two bands furnished music for the occasion. An exhibit was made of fruits grown on the lands embraced within the area now reached by more than sixty miles of water mains, which are supplied from a reservoir containing an area of nearly 700 acres. The enterprise has absorbed about one million dollars, and its completion marks an era in the progressive development of San Diego county, of which we may well be proud. A model of the great dam at Sweetwater cañon was exhibited, with banks of beautiful roses lined with green grass, the water flowing over the miniature dam upon a bed of lilies. A finer display of roses could not have been asked for. Oranges and lemons were in lavish abundance, and apples and large, luscious strawberries appeared in the exhibit. Quantities of callas, geraniums and palm leaves completed the floral decorations. We can congratulate our sister city on her climate, soil and water—especially on her *agua dulce*; and hope she may soon have occasion to congratulate San Diego on an equally bountiful supply of pure mountain water from our great flume.

A Glance at Books.

Community Homes the right way, and the best way for all to live. 108 pp.; price 25 cents; A. Longley, 2 N. 4th street, St. Louis, Mo.

This book gives an explanation of the principles, organization and practical details of community homes, with common property, united labor, mutual support and equal rights to all, so as to secure much greater comfort and enjoyment to all the members than can possibly be obtained in the ordinary separate way of living.

Changes in the Color of Grapes Grown in Northwestern Mexico.

BY DR. EDWARD PALMER.

The village of San Jose de Guaymas is nine miles north of Guaymas proper. At the village are numerous gardens, which supply the city of Guaymas with fruit and vegetables. As there is no certainty when rain will fall, or the amount, the cultivators have recourse to wells. The soil has more the appearance of that found about old dry river beds than anything else, and one unacquainted with its quality would decide it was worthless; but with water and heat, many of the finest varieties of grapes are grown—not surpassed in size of bunches or flavor of fruit by the grapes of California.

Some kinds of grapes, known in other localities by their distinctive colors, are here so modified or entirely wanting in their natural color as to be unrecognizable.

FLAMING TOKAY.

Here this beautiful grape belies its name, for it gradually and variously changes its color until the fifth year, when the original color is an exception, and a greenish white is the new hue taken on. Sometimes all the bunches of a vine are of that color; on another vine a bunch may have a few berries with a slight tinge; then another with three or four together nearly as deeply tinged as the original. Then a large bunch may have a number of berries very slightly shaded, or there may be here or there one tinged; while several bunches on the same vine are not the least tinged. In fact, some entire vines, the fruit of which will be a greenish white, and would not be taken for what it really is.

OLD MISSION GRAPE.

This grape is remarkable for its eccentricity of coloration. On the same vine and bunch, the berries may be of every shade of reddish black or purple to greenish white. On some vines all bunches will be nearly of the original color, while the bunches on another vine may be purely greenish white; or a vine will have a bunch or two variable in color.

BLACK PRINCE.

This well known black grape is seldom seen here in his genuine black dress, but in every shade of black or brownish black—or with the slightest tinge of those colors, or not at all colored, being more like the Sweetwater in hue, yet perfectly ripe. There are vines that grow side by side with the changeable ones, yet their fruit are not the least affected in color; for instance, the Sweetwater, Malvadeir, the Rhine-wine grape and a large one from the coast of Africa. Some of these, are as dark in their color, naturally, as the grapes before mentioned, that change color so variably, yet are not the least altered in hue; while the others last mentioned, some being white or nearly so, have no dark color infused through the berries.

Why should the berries of certain dark-colored grapes be deprived of their usual color, and others, that are light in color, not have any dark shades added to them? Yet they grow in precisely the same soil and climate, and are watered alike.

We acknowledge a complimentary to the Tenth Annual Floral and Citrus Exhibition of the Santa Barbara County Horticultural Society.

The Deer of Southern Lower California.

Judge Caton, in his excellent work, "The Antelope and Deer of America," Second Edition, year 1881, page 337, says: "The mule deer in the Rocky Mountains is four times as large as in Lower California, which difference is also supplemented by the fact that the change in the antler is quite as great, for, on all of the small variety the antler has ceased to be bifurcated, but presents a spike like that of the yearling deer of the north; or if ever bifurcated, that feature is as rare as on the first antlers of the better developed variety of the north, and yet I do not hesitate to rank them in the same species, from their exact similitude in all other respects, according to the reliable information received of them."

On page 119, he refers to it as "a remarkable variety of the Mule Deer, found by Mr. John Xantus, as I am informed by Professor Baird, one of the most reliable collectors of the Smithsonian Institute, who forwarded several specimens to Washington, from Cape St. Lucas, Lower California. With all the other indicia of the Mule Deer, they are very diminutive in size, and have spike antlers about six inches in length." "I have not been able to learn that this diminutive mule deer has been met with except in the lower part of the peninsula, and the extent of its habitat there is as yet uncertain."

I have no doubt that the specimens Xantus forwarded to the Smithsonian were yearling males, which are generally known as "Spike Bucks," though I have not seen those specimens. There is but one species of deer in the Cape region, and that is a fine large animal, quite equal in size to the Mule Deer of the Rocky Mountains, and the males have antlers as perfect, as profusely branched, and not materially different from the antlers of the deer of California, of corresponding ages.

I saw more than a hundred pairs of antlers in various parts of the Cape region, and of these but one pair deserves special mention. The unusual pair were from a "Capon,"—so the hunter who had them said. They were vertical, thick, angular, very rough and in velvet. One prong was twelve inches long, the other three inches longer.

It is well known that these unfortunates rarely or never have perfect antlers, consequently these exceptional antlers signify nothing.

The Mexican hunters, of whom I inquired concerning the deer of the country, invariably told me there were "tres classes" (three kinds) of males, which they distinguished by the antlers, and I supposed they said there were three species of deer there; but after I became convinced from much observation that there was but one species of deer in this part of the peninsula, I asked how many classes of females there were. "Uno, no mas, Senor" (one, no more) was the invariable reply.

I saw a skin at Miraflores, in possession of Senor Vidal Collins, which must have been taken from a deer that would have weighed over three hundred pounds, live weight, if in good condition; and I shot a buck in the Victoria mountains, which probably weighed two hundred and fifty—so heavy, in fact, that Dr. H. ten Kate, myself and Francisco Amador, the guide, had much difficulty in dragging it, with united effort, up the cañon about one hundred yards.

L. BELDING.

March 6th, 1888.

"NONE OF OUR BUSINESS."

[A little girl was heard to finish her evening prayer with these words: "And I saw a poor little girl on the street to day, cold and barefooted, but it's none of our business, is it, God?"]

None of our business! wandering and sinful,
All through the streets of the city they go,
Hungry and homeless in the wild weather—
None of our business? Dare we say so?

None of our business! children's wan faces,
Haggard and old with their suffering and sin.
(Hold fast your darlings on tender, warm bosom,
Sorrow without, but the home-light within.)

What does it matter that some other woman
Some common mother, in bitter despair,
Wails in a garret, or sits in a cellar,
Too broken-hearted for weeping or prayer?

None of our business! sinful and fallen,
How they may jostle us close on the street!
Hold back your garments! Scorn! they are used
to it;

Pass on the other side lest you should meet,

None of our business! on, then, the music,
On with the feasting, though hearts break for-
lorn;

Somebody's hungry, somebody's freezing,
Somebody's soul will be lost ere the morn.

Somebody's dying (on with the dancing!)

One for earth's pottage is selling his soul;
One for a bauble has bartered his birthright,
Selling his all for a pitiful dole.

Ah! but One goeth abroad on the mountains,
Over lone deserts, with burning deep sands,
Seeking the lost ones (it is His business!)
Bruised though his feet are, and torn though
His hands.

Thorn-crowned His head and His soul sorrow-
stricken
(Saving men's souls at such infinite cost),
Broken His heart for the grief of the nations,
It is His business saving the lost.

—*Lend a Hand.*

The Lime Kiln Club on Health.

The Fourteenth Assistant Agriculturist of the Agricultural Department forwarded a communication in which he inquired what particular law of "hyjean" the Lime Kiln Club followed to preserve its general health. If it had any particular rules laid down, or programme mapped out, the Government would like to have them.

"De seckretary will answer dat we ar' simply guided by common sense," replied the president. "We wash our feet occashunally. We take a dip in the rain bar'l when it ar' not too cold weather. We hand our green melons ober de fence to de nayburs. When it snows in July we put on our obercoats, an' when the daisies blossom in January we lay aside our red flannel shirts. We neither stuff nor starv. If dis guv'ment wants to be healthy let it pour lager beer into a rat hole an' cold water down its froat—eat less sweet-cake an' drink mo' buttermilk—sleep mo' hours an' do less poker playin'—*Detroit Free Press.*

Don't Whine.

Don't be whining about not having a fair chance. Throw a sensible man out of a window, he'll fall on his feet and ask the nearest way to his work. The more you have to begin with, the less you will have in the end. Money you earn yourself is much brighter than any you can get out of dead men's bags. A scant breakfast in the morning of life whets the appetite for a feast later in the day. He who has tasted a sour apple will have the more relish for a sweet one. Your present want will make prosperity all the sweeter. Eighteen pence has set up many a peddler in the business, and he has turned it over until he has kept his carriage. As for the place you are cast in, don't find fault with that; you need not be a horse because you were born in a stable. If a bull tossed a man of mettle sky high he would drop down in a good place. A hard-working young man with his wits about him will make money while others will do nothing but lose it.

Who loves his work and knows how to spare,
May live and flourish anywhere.

As to a little trouble, who expects to find cherries without stones or roses without thorns? Who would win must learn to bear. Idleness lies in bed sick of the mulli-grubs, while industry finds health and wealth. The dog in the kennel barks at fleas, the hunting dog does not even know that they are there. Laziness waits till the river is dry and never gets to market. "Try" swims in and makes all the trade. "Can't do it" would not eat the bread set before him, but "Try" made meat out of mushrooms.—*John Plowman.*

Conversation.

Many years ago the famous and faithful Hannah More said: "In private we must watch our thoughts, and in society we must watch our words. And a higher authority, Psalm 50, verse 23, 'to him that ordereth his conversation aright will I show the salvation of God.' And Paul said to the Phillippians: 'Only let your conversation be as it becomes the Gospel of Christ.' And in Proverbs we are told: 'A word fitly spoken is like apples of gold in pictures of silver.' Also, 'A word spoken in due season, how good it is.'"

A Beautiful Sentiment.

"I expect to pass through this life but once; if, therefore, there be any kindness I can show, or any good thing I can do to my fellow human beings, let me do it now, let me not defer or neglect it, for I shall not pass this way again."

A Good Motto.

For the home and the boys, first, last and all the time.

What shall be done with the Saloon? is the question of the day. Various are the answers. Regulate it, tax it, license it, prohibit it, are the answers that come from everywhere. All have been tried. It is found that regulation does not regulate, and that tax and license encourage the saloon by making it a monopoly. Prohibition in places has done much good. Against prohibition the cry is raised, "It doesn't prohibit." Why? Because officers do not enforce the law. But they are improving in this respect in many localities, and all over our broad land the people are arousing themselves. They are beginning to realize that the deadliest foe the home has is the saloon. "The saloon must go" is the watchword. The fight is on. Voters, councils, assemblies and congress must take sides, and that soon, either for the home and the boys, or for the saloon. We are the boys and home, first, last and all the time.—*From the Pacific Beach Magazine, San Diego.*

A Practical Way of Doing Good.

How often we forget that he that "wineth souls is wise." A body of students from Edinburgh University resolved upon evangelistic work, hired a house in the worst part of the Scotch capital and took up their residence there. At first the people were sullen and suspicious. They did not want any psalm-singing and preaching. But the students had a different plan; they went quietly about their own affairs, living simply, yet showing their neighbors a higher grade of comfort and cleanliness. When there was sickness in the vicinity some of the students who were studying medicine offered their services. Gradually this band of earnest young Christians won their way to the hearts of these rough, abandoned people. Not a word was said about religion all this time. The brave fellows lived the love of Christ instead of talking about it. In the end they converted hundreds. There's a philosophy in this plan which young people can understand. In doing philanthropic work remember those Edinburgh students.—*Our Youth.*

"I send you my son C. O. D. with privilege of examination," wrote a business man to the principal of a well-known preparatory school. "If not satisfactory, return at my expense." Six days later the young man came back.

Humming Birds.

There is no group of birds so interesting to the collector as the humming-bird, it being the smallest in size, the most gorgeously beautiful in color, and almost the most abundant in species of any single family of birds. They are found only on the continent and islands of America, and are found all the way from the Arctic regions in the north to Patagonia in the south, but are most abundant in Central America.

There are over three hundred known species, and new ones are being discovered every year. They are called humming-birds on account of the buzzing sound which they produce with their wings. Wood says: 'So characteristic is this humming sound that it is not precisely the same in any two species, and in many instances is so very decided in its tone that a practiced and observant ear can often detect the species of a humming-bird by the sound which it produces in flight.' One of the common species in North America is the ruby-throated humming-bird, so called on account of the 'glowing metallic feathers that blaze with ruby lustre upon its throat.' They arrive in Ohio about the 10th of May, and usually come in pairs. About the first week in June they commence to build their nest, which is composed of a soft down taken from the stems of the fern. They usually cover the outside of the nest with lichens, thus giving it the appearance of a mossy knot; so much so that I have spent nearly an hour looking for a nest after I had discovered by the actions of the bird which tree it was in. Another fact is that of sixteen nests found in this vicinity in the past three years, all were found south of the main part of the tree. The eggs are two in number, white and nearly elliptical in shape, being of about equal sizes at both ends.

Mr. Webber discovered a curious habit connected with their nesting. He frequently observed, while watching for their nests, that the ruby-throats, after leaving their station, shot suddenly and perpendicularly in the air until they become invisible. At last he had the pleasure of seeing the female fall as from the sky upon the spot where she had built her nest, so that this curious habit of ascending and descending seems to be used by the bird for the purpose of concealing the precise position of her nest.—*E. E. Hayns.*

One Step at a Time.

I stood at the foot of a Swiss mountain which towered up from the foot of the Vispbach Valley to the height of ten thousand feet. It looked like a tremendous pull to the top. But I said to myself, 'Oh, it will require but a step at a time!' Before sunset I stood on the summit enjoying the magnificent view of the peaks around me, and right opposite to me flashed the icy crown of Weisshorn, which Prof Tyndall was the first man to discover, by taking one step at a time. Every boy who would master a difficult study, every youth who hopes to get on in the world, must keep this motto in mind. When the famous Arago was a school boy he got discouraged over mathematics. But one day he found on the waste leaf of the cover of his text book a short letter from D'Alembert to a youth discouraged like himself. The advice that D'Alembert gave was, 'Go on, sir; go on.' 'That sentence,' said Arago, 'was my best teacher in mathematics.' He did go on steadily until he became the leading mathematician of his day, by going one step at a time. It was by such steady steps that Joseph made his way up from being an ill-used lad until he became the noble ruler of Egypt. If all of Joseph's trials and temptation had come on him at once they might have crushed him; but they came one at a time, and God helped him every time to conquest. Just as certainly will He help you if you ask Him by prayer.—*Dr. Cuyler.*

Begin.

"Tall oaks from little acorns grow," was doubtless repeated by children, who, if now living, would be centenarians. It is but to begin and continue in the right direction and the accomplishment of a purpose is secure, of which the following item is an evidence in point:

"The Bibliotheque Royale in Paris is said to have been founded in 1340. It started with only twenty books, and has become one of the best European collections. It is especially rich in old manuscripts."

"The case is precisely the same with the science of human thought and philosophy, as with external life and daily experience. Nothing is more highly estimated in society, business or politics than an active and consistent character.—*Schlegel.*

An Anthem Accurately Described,

A correspondent who is obliged to listen every Sunday to a "hanthem," which he denominates all Greek to him, thinks the following description of that familiar part of the service, which might mean so much, and which too often counts for little, good enough to be reprinted. It is from the *Troy Times*:

Speaking of anthems reminds me of the story of two old British sailors, who were talking over shore experience. One had been to a cathedral, and had heard some very fine music, and was descanting particularly upon an anthem which gave him much pleasure. His shipmate listened for awhile, and then said, "I say, Bill, what's an anthem?" "What?" replied Bill, "do you mean to say you don't know what a hanthem is?" "Not me." "Well, then, I'll tell yer. If I was to say to yer, 'Ere, Bill, give me that 'andspike,' that wouldn't be a hanthem. But was I to say, 'Bill—Bill—Bill—giv—giv—giv—giv me, giv me that—Bill, giv me, giv me that hand, giv me that hand, handspike, spike—spike—Bill, giv—giv me that—that hand—handspike, hand—handspike, spike, spike, spike, ah—men, ah—men; Bill, giv methathandspike, spike, ah—men!' Why, that would be a hanthem."

SQUIBS.

"It's no use to feel of me wrist, docther," said Pat when the physician began to take his pulse, "the pain is not there, sir; it's in my head entoirely."

Many a weary youth, sitting in his solitary room at midnight, and driving a big needle through a button with the back of a jack-knife, is wondering whether he will be doing his own sewing in 1889.

A young man in Louisville, Ky., who smoked forty cigarettes a day, has just been declared an idiot by the courts. The interesting question of whether the being an idiot made him smoke the cigarettes or smoking them made him an idiot, was not positively determined by the jury. Perhaps it does not need to be.

Home.

Happier far than thou,
With the laurel on thy brow,
She who makes the humblest hearth,
Lovely but to one on earth.

—*Mrs. Hemans.*

'Have communion with few,
Be intimate with One,
Deal justly by all,
And speak evil of none.'

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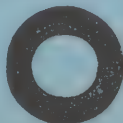
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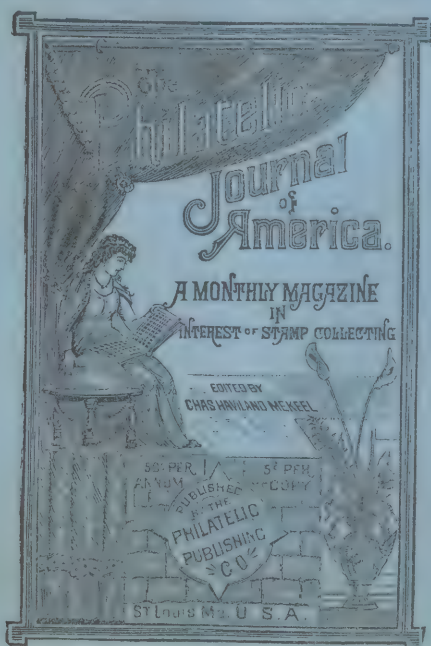
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CONTENTS:

Natural History	1
The Warbling Vireo—Part II.....	2
Proofs and Essays.....	2
An Indian Graveyard.....	3
Exterminating Snails.....	4
A Dog Caught by an Eagle.....	5
A Rich Discovery—Part II.....	6
U. S. Half-Dim. s	6
Egg of the Great Auk at Auction	7
Review Table.....	7
Exchange Notes.....	8
Life in the Chuckawalla Mountains.....	9

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Barn Swallow	02
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California Thrasher	15
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Baird's Cormorant (3)	25	Earn Owl	15
Roseate Spoonbill	50	California Screech Owl	40
Snowy Heron	08	Burrowing Owl (5-6)	15
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Little Blue Heron	08	Nuttall's Woodpecker	75
Green Heron (4)	05	Flicker	04
Black-crowned Night Heron	08	Red Shafted Flicker	05
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Coot	05	Cassin's King Bird (3)	20
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(OVER)

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VOL. VIII. NO. I.

OCTOBER, 1888.

WHOLE NO. 39.

NATURAL HISTORY.

PART III.

After leaving the unorganized bodies we turn our attention to botany, the commencement of unorganized bodies. The science of botany includes everything relating to the vegetable kingdom—whether in a living or in a fossil state. Its object

Greeks were the early cultivators of science, and botany was not neglected, although the study of it was mixed up with crude speculations as to vegetable life and as to the changes of plants into animals. Æsculapius and his priests, the Æsclepiades, who studied the art of medicine, had their attention directed to plants, in a pharmaceutical point of view. About 300 years before Christ, Theophras-

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members of the vegetable world, and traces the mode in which the most despised weeds contribute to the growth of the mighty denizens of the forest. The plants which adorn the globe, more or less, in all countries, must necessarily have attracted the attention of mankind from the earliest times. The science that treats of them dates back to the days of Solomon, for that wise monarch spake of trees from the cedar of Lebanon to the hyssop on the wall. The Chaldeans, Egyptians and

consideration of the mode in which plants are distributed over the different regions of the globe.

Sixth — Patacontological botany, the study of the forms and structures of the plants found in a fossil state, in the various strata of which the earth is composed.

C. S. MASON,

(To be Continued.)

[The first two parts of this article appeared in Nos. 1 and 2 of "The Collector's Illustrated Magazine," a few copies being left, which will be supplied at 5 cents each.]

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Greeks were the early cultivators of science, and botany was not neglected, although the study of it was mixed up with crude speculations as to vegetable life and as to the changes of plants into animals. Æsculapius and his priests, the Æsclepiades, who studied the art of medicine, had their attention directed to plants, in a pharmaceutical point of view. About 300 years before Christ, Theophrastus wrote a history of plants, and described about 500 species used in the treatment of diseases. Botany may be divided into the following departments:

First—Structural botany, having reference to the anatomical structure of the various parts of plants, including vegetable histology, or the microscopic examination of tissues.

Second—Morphological botany, the study of the forms of plants and their organs.

Third—Physiological botany, by some termed organology, the study of the life of the entire plant and its organs, or the consideration of the functions of the living plant.

Fourth—Systematic botany, the arrangement and classification of plants.

Fifth—Geographical botany, the consideration of the mode in which plants are distributed over the different regions of the globe.

Sixth—Patacontological botany, the study of the forms and structures of the plants found in a fossil state, in the various strata of which the earth is composed.

C. S. MASON.

(To be Continued.)

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THE WARBLING VIREO.

(Vireo Gilvas.)

PART II.

The soft, murmuring song-notes of this innocent little tenant of the woods and groves is often heard in the sunny days of our early summer months, while the performer itself is hidden in deep concealment amid the foliage of the trees. And at other times it may be seen in the woods or among the fruit and ornamental trees near the residence of the farmer or the dweller in the village, silently gleaning its insect food, without any exhibition of fear for the children romping around, but with a watchful eye on the domestic cat, whose green eyes watch its every movement from below. This species may also be observed in the branches of the timber scattered along the banks of the watercourses, and in low, second-growth woods; but its chief place of habitat is the shade of the ancient forest, some remains of which still dot the rolling lands, and swampy vales of Ontario. And when its domestic felicity is disturbed by the invasion of its nesting place on the part of mankind, its notes of displeasure seem peculiarly sad and appealing, as if it meant to say: "O! crowning work of creation; are there not enemies enough among the feathered race and lower orders of quadrupeds to disturb our domestic affairs and peace of mind, as well as in the passing of the thunder-storm and the various changes of climate, without you adding to our cares and the number of our foes, especially when we are among your best friends and cannot possibly, under any circumstances, do you any harm? Shame!" The song-notes of the male of this species are low and soft, but musical, and are generally warbled in the latter part of May and through the month of June, or chiefly while the female is busy at her nesting work or patiently incubating her eggs.

And it is also probable that while she performs this duty, her wants are daily supplied with the most desirable articles of food by her kind and affectionate partner, who also assists to supply the young with their daily needs, until they are able to provide for themselves.

Like many others of the smaller species of our birds, this vireo is often imposed upon by that feathered tramp, the Cowbird, who, by depositing one or more of its eggs in the nest of this species, imposes upon it the burthen of raising the young, to the detriment of its own progeny. The nest and eggs of this bird can scarcely be distinguished from those of the red-eyed Vireo, except, perhaps, that both are a little smaller and more elevated off the ground, and perhaps better concealed by the surrounding foliage. The nest is composed of various fine, fibrous materials, firmly and neatly fitted together, in the form of a small basket, the rims of which are fastened to the forks of a small horizontal branch, at various elevations from the ground. The set of eggs numbers three or four; clear white, with a few dark spots towards the large end. Like the other members of its family who visit this country, its periods of migration are the months of May and September.

WM. L. KELLS.

(To be Continued.)

[The first part of this article appeared in No. 2 of "The Collector's Illustrated Magazine," a few copies being left, which will be supplied at 5 cents each.]

—:O:—

PROOFS AND ESSAYS.

—BY FIG.—

A great many collectors regard proofs of stamps—or stamp-proofs as they are quite often termed—a kind of drug on the market, or a cheap substitute for the unobtainable speci-

mens that were used to pay postage. I wish to give collectors an idea of what proofs are and of the benefit they are to us. As most collectors are aware, proofs are the first impressions from the plates, and consequently are very bright and showy. They are struck off on different varieties of paper, and are printed principally to test the plates to see if the engravings are correct. They are not allowed to be used for postage so the few that are struck off are sold to any one that will pay the required price asked by the Government. The reason collectors should appreciate the value of proofs is illustrated in the fact that many stamps which are almost unobtainable—except for large sums—can be substituted in a collection of these proofs; and they fill the place well. How much better it is to book a proof of a rare stamp, to fill the set of a certain issue, than to have no representation of it at all? And when collectors realize what these proofs are, they should appreciate their value more—as, for instance, with high values of the State Department, and also high values of newspaper stamps, the originals used or unused can hardly be purchased; and the proofs of same can be had at a comparatively small sum, which is, or should be, considered a very lucky circumstance to the collector who desires to complete his sets of U. S. stamps. Now, let us turn our attention for a short time to essays. These impressions are not to be called stamps, for they never were intended to be used for postage. They are simply printed from engravings which the government had ordered to be made to see how they would appear if it was considered probable that they should be used for postage stamps. They are generally printed in every variety of color—just as the thing happens. They are not to be considered proofs, as they are the proof of nothing but themselves, as they are all that are printed; but, if the design of an en-

graving is accepted as an issue by the government, it is not an essay, but a proof. I think I have distinguished the difference between a proof and an essay, and in concluding would state that I advise collectors who are unable to obtain the real issue of stamps, to substitute the same with proofs; but, as to essays, I would advise collectors to let them alone, as they are nothing but philatelic curiosities or postal samples.

—:O:—

AN INDIAN GRAVEYARD.

It had been a very quiet week and when Saturday came, the universal holiday throughout the country, we were all glad to break the monotony by taking an excursion into the woods. As boys are wont in the summer time to spend about half their time in the woods or along some stream, so were we.

If my memory serves me rightly, about a dozen of us left the common rendezvous (the old fire alarm tower, then unused and falling to pieces) about eight o'clock a certain Saturday morning in June, 1877. We were uncertain where to at go first, some wanted to go fishing, while others were in for playing games upon the village "green". We finally decided to go to a spot some three miles from town, where we had never been, and where recently there had been some dozen or two skeletons unearthed in a gravel pit. This locality had become famous to all the boys in the neighborhood as a relic field, and many a youngster carried arrow heads and pottery fragments in his pockets to school, and exhibited them to the envy of the other boys.

We reached the plain that this gravel pit is situated on shortly after nine o'clock. We found there a pit some fifty feet in length and twenty feet deep. There was a stratum of surface soil three feet in thickness, and it was in the surface soil that the bodies had been buried. We found,

that by climbing up the sides of the pit and using some tools that the men had left when hauling gravel, we could unearth numbers of bones and fragments of pottery. The bodies seemed buried with regularity, but unaccompanied by relics of any description save a few arrows and pottery pieces. We searched the spot for several hours, and found and carried away several hundred pieces of pottery and twenty arrows. One of the boys secured a whole skull of which he was very proud. I remember he kept that skull for a number of years and finally loaned it to a doctor. The doctor probably sent it to a medical college for the boy never saw it again.

On our way home from the graveyard we went down a creek for half a mile or more out of our way to examine a mound said to be there. We found this mound smaller than was reported, but yet it was very interesting because there was a small ring of two feet in height around the mound. I afterwards found out that this mound was famous in the early history of our county, not because of any relics found in it, but for this reason:

When Gen. Clarke was sent against the Miamis and Shawnees of southern and western Ohio, he met with great resistance at a point now known as Old Town, Ohio. It was here that the Indians (Shawnees) had one of their largest villages. Clarke burnt their town by advancing upon it in the night, and surprising the Indians. The Indians immediately fled, and he, as I have said, fired their huts, but they gathered together as soon as daylight came, and when Gen. Clarke began his march back to Fort Washington, attacked him with great fury. Clarke was near this mound when the attack commenced. There were woods all around him, and it seemed as if there was an Indian behind every tree. Hastily gathering a few logs and throwing up this little ring around the mound with the

points of their bayonets, his men laid down side by side inside their fortification. There was barely room for all of them. It is said that they at last repulsed the Indians, although the loss was about equal on both sides. Clarke retreated to Fort Washington. Numbers of ramrods and bullets, as well as other evidences of a battle, have been found in the neighborhood of this mound.

The mound itself was opened in 1880 by a New York gentleman whose name I never could learn, but the owner of the mound told me that this gentleman carried away with him numbers of implements of slate, and a few fine spear heads as rewards for his labor.

The gravel pit, which ten years ago was so small, has now assumed large proportions, and numbers of relics have been frequently found in the excavations for gravel.

W. K. MOOREHEAD.

—:O:—

EXTERMINATING SNAILS.

Some of our native Land Mollusca, as well as our indigenous plants, are in danger of extermination in the near future, as the result of pasturing sheep in certain localities—for example, *Helix* (*Arionta*), *Ayresiana*, *Neur*, whose habitat is restricted to some of the islands off our Coast, recorded from Santa Rosa, San Clemente and San Miguel Islands.

The immense numbers of dead and bleached shells found upon these islands show that it was formerly very abundant, but "live shells" are now very scarce.

The sheep, which have been continuously pastured and allowed to run at large for a number of years, eat off the grass and other vegetation, leaving the sandy soil unprotected from the trade winds, which strike the islands with great force, removing the soil to such a depth in some places as to leave the roots of trees and shrubs standing erect above the present surface to the

height of three or four feet, thus depriving the snails of their natural protection and food, causing them to die in large numbers. At the time of my visit to Santa Rosa Island, some years ago, the ground was, in some places, nearly covered by dead shells, and but few live specimens could be found, and those only near the roots of the *Opuntias* (native Cacti), where the sheep could not disturb them. I searched diligently in the localities where the dead shells were found, but failed to find a single living specimen. The few I did find were in localities at some distance from their old haunts, and only where the cacti were sheltered from the action of the prevailing winds, and where the vegetation was not suited for food for the sheep.

LORENZO G. YATES.

—:O:—

A DOG CAUGHT BY AN EAGLE.

Late one afternoon, as I was eating supper, I heard a commotion in the flock. I thought it was probably due to a coyote, as there are many in the hills. I sprang to the opening of the tent and stepped out. As I did so I saw an immense eagle on outstretched pinions swooping down upon the flock. For a moment I surveyed the king of the sky with admiration—but it was only for a moment. With a rush of wing he seemed to drop from his perch in heaven, and a second later I heard the agonizing *kiyies* of my imported Scotch shepherd dog—the eagle had mistaken him for a lamb. For a few moments there was a conflict on the ground, when slowly the eagle ascended with the struggling, *kiying* dog in his talons. The load was heavy but the proud monarch of the air, with majestic bearing, mounted upward. I rushed into the tent and seized my gun and cartridge-belt. The eagle at this time was about 75 feet above the ground. The first

shot seemed to daze him and the dog uttered an additional yelp of pain. Five more shots I fired into the bird and dog. The seventh shot the eagle let go the dog and the animal fell dead at my feet. The eagle, slowly fluttering, came to the ground. My first impulse was to kill him, and then I formed a second and better resolution, that I would keep the bird; and here it is, as sound as a dollar, as the shot only stunned him for the time being.

[The above, a fine representative of the grey eagle, measured nine feet six-and-a-half inches from tip to tip of wings, and was on exhibition here in Riverside.—ED.]

—:O:—

With this issue, "The Old Curiosity Shop" again changes hands within the space of a few months. Originally founded by Will M. Clemens, it is now in its seventh volume, and is one of the oldest and best established *collector's* journals in this country. In presenting to you this, the first number issued under its new management, we earnestly ask your co-operation to further the advancement of the sciences which we represent, and hope you may be able to send us notes and contributions, of interest to our readers, which will enable us to keep "The Old Curiosity Shop" up to the standard already established by our predecessors.

* * *

After issuing two numbers of "The Collector's Illustrated Magazine," we were obliged to discontinue, much to our regret, being unable to get it entered for transmission through the mails as second-class matter, and all unexpired subscriptions and advertising contracts will be filled with this magazine.

* * *

When writing to any of our advertisers, please do us a favor by saying that you saw their advertisement in "The Old Curiosity Shop."

THE OLD CURIOSITY SHOP.

E. M. HAIGHT, Editor and Proprietor.

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Advertising matter must be in by the 15th to insure insertion in the next number.

Letters of inquiry must contain stamp for reply.

We request all our readers to send us contributions relating to Natural History, Coins, Stamps, Relics, Curiosities, etc. Publishers wishing to discontinue their papers can have their unexpired subscriptions and advertising contracts filled by us on favorable terms.

All Specimens, Books, Catalogues, etc. sent us will be carefully reviewed.

Address all communications to E. M. HAIGHT, Riverside, Cal.

A RICH DISCOVERY.

PART II.

This was the answer given her as she called the following day. She burst into tears exclaiming, "God pity us; must we starve?" and before we could address her another word she was gone. The next week as I was passing out of the bank, I met Harry, and shaking him by the hand, I inquired after his mother and sisters. All were well; but he wanted me, if I would, to take the old French coin, and give him \$3 for it, which I did and told him to keep up good heart, may be he would find more if he was diligent in his search. He assured me he would be and went away quite light-hearted. I think about two weeks after this Harry came into the bank inquiring for me. I saw on the instant he had some agreeable news to communicate, and

took him into an inner room, where we would be alone. The instant the door was shut, he burst out with "O, Mr. B., I have found lots of them." I guessed at once what he meant, and said, "Tell me all about it, Harry." He was excited most thoroughly, but told the story plainly. "For the first few days after you were there, I dug considerably in the old fort but found only a few pieces of old iron and a solitary copper; but I kept constantly at it, for we so needed the money if I could find any, and your words encouraged me very much. I came to the city and let you have the one I had at \$3, and spent the money for flour to keep us alive. Every day after this I felt I must find more gold pieces or what should we do. Day before yesterday I found two of them near one of the inner corners of the fort. This greatly encouraged me. I commenced digging all around, and digging deeper. Yesterday all day I kept going deeper, and at dark I gave up tired out and disheartened. Thought I would not try any more; but my night's sleep rested me and I went early at it again. Some time in the forenoon I came upon some old rotten wood that seemed to have been plank. My pick went through it into a hollow space below.

J. G. BINGHAM.

(To be continued.)

[The first part of this article appeared in No. 2 of "The Collectors' Illustrated Magazine," a few copies being left, which will be supplied at five cents each.]

U. S. HALF-DIMES.

BY HOWARD ROCHESTER.

Our silver half-dimes first made their appearance in 1794, and were coined until 1874 (1873 being the last date), except the years of 1798, 1799, 1804, 1806 to 1829. In all there are sixty-three different specimens, about nineteen of which com-

mand a premium. The rarest date of the half-dime is that of 1802, which retails in fine condition for \$100.00, and will be purchased by a coin dealer for \$75.00 or over, according to condition. The next rarest specimen is that of 1797, with thirteen stars. It sells for \$20.00. Then come the years of 1794, 1797, with fifteen and sixteen stars, and 1805. Each sells for \$15.00. In the year of 1797, three varieties were coined, one with thirteen stars, another fifteen and the other with sixteen—the former being the rarest. There were two varieties coined in 1835—one with small date and the other with large date, both being worth about the same; and that very little. In the year 1838, there were two varieties coined—one with stars and the other without. In the years of 1840, 1848, 1853 and 1860 were also two varieties coined, none of which command much of a premium, except the one of 1860 with stars, which sells, proof condition, for \$4.00. Much can be found to interest the young numismatist by studying the various issues, etc., in the United States silver half-dimes. You can get much information from any standard or reliable catalogue—one that gives electrotypes of the different issues and one that can be relied upon; for instance, "Scott's Catalogue of Gold and Silver Coins." You should also have a good premium coin book. You can roughly guess the price that a dealer will give you for a coin by dividing the retail price by five. If it comes over twenty-five per cent. over face value, they will generally purchase it; if less, they don't generally command a premium, and they are not likely to purchase it. Much can be learned in this way at a very little expense.

—:O:—

Publishers noticing "The Old Curiosity Shop" in their columns, please send marked copy and will reciprocate.

EGG OF THE GREAT AUK —AT AUCTION.—

At an auction sale in London, December 13, 1887, an egg of the great auk was sold to a Mr. Leopold Field for the snug little sum of one hundred and sixty-eight pounds sterling (eight hundred dollars). Its former owner purchased it some twenty years ago, for thirty-one pounds. Probably, many people thought him crazy, but he realized about four hundred per cent. on his investment. Almost equal to "corner lots"—was it not?

LORENZO G. YATES,
Santa Barbara, Cal.

—:O:—

REVIEW TABLE.

We have received from Mr. Geo. F. Whittemore of Fitchburg, Mass., a very neatly-printed catalogue of the "Flora of Fitchburg and Vicinity." It is the work of several students of the Fitchburg High School, and contains a list of eight hundred and sixteen specimens.

* * *

A catalogue of California fossils has been received from J. G. Cooper, M. D., Haywards, Alameda Co., Cal., compiled from the seventh annual report of the State mineralogist. It is neatly printed and bound in paper, and contains about eighty-five pages. The localities of the fossils are given, and it also shows the advancement made in our knowledge of California fossils since the latest published catalogue of fossils in 1869.

* * *

Dr. Lorenzo G. Yates, of Santa Barbara, Cal., author of "The Ferns of Ceylon," "Notes on Hawaiian Ferns," "The Ferns of N. America," etc., has under preparation a work entitled "All Known Ferns," which will be invaluable to all students of pteridology, as fourteen years have elapsed since the publication of any similar

work, and during that time more than six hundred new species of ferns have been discovered and described, the descriptions being scattered through the publications of various scientific bodies and societies throughout the civilized world, thus rendering it almost impossible for the majority of students to gain access to the description and names of the new species. The work will be an octavo of about 300 pages, substantially bound in cloth, and the price will not exceed \$2.50.

* *

"Insect Life" is the title of a new journal devoted to the economy and life habits of insects, especially in their relation to agriculture. Edited by U. S. Entomologist, Prof. C. V. Riley, and his assistants, Washington, D. C. Vol. I, No. 1, July, 1888, contains several articles on injurious insects, with descriptions, life habits and remedies for their destruction, and is of inestimable value to the farmer.

* *

W. G. Robinette, of Flag Pond, Va., will please accept thanks for a copy of his price-list and a box of very fine petrimites. Any one desiring to obtain some of these curious fossils should address him at once.

—:O:—

EXCHANGE NOTICES.

This column is for the use of subscribers only. Exchange notices must be in by the 15th of the current month to insure insertion in following number, and must be written on separate piece of paper. No postal cards noticed.

I would like to exchange natural history specimens of all kinds for job printing. Send samples and prices of work. E. M. HAIGHT,
Riverside, Cal.

* *

Wanted—Dana's Manual (complete) of Geology, a good manual of N. A. Ornithology, papers and books relating to West Coast Botany, Lepidoptera and Conchology, Amateur Publications. Send sample

copies with offers, also want good minerals. Will exchange western bird skins for the same.

AURELIUS TODD,
Elk Head, Oregon.

* *

Seventy-five assorted Chinese coins for the best offer of bird's eggs in sets, also U. S. and foreign stamps and coins for bird's eggs.

JAMES LEVY,
3255 Wabash Ave., Chicago, Ill.

* *

Sets, single and second-class eggs for exchange, or petrified wood given for eggs. A. CALDERWOOD, Jr.,
Santa Rosa, Sonoma Co., Cal.

* *

Stone Indian relics wanted—I will exchange any organ or sewing machine, violin new from factory, for first-class Indian relics, or will exchange coins in pennies and half-pennies dated 1794 and upwards; have 150 to exchange.

WM. H. GWI,
Hamburg, Pa.

* *

Would like to obtain by exchange or purchase, butterflies and moths from Pacific Coast. Specimens from Texas, Arizona and Mexico especially desired.

CHAS. S. MCKNIGHT, M. D.,
Saratoga Springs, N. Y.

* *

Steatite, pyrites, magnetic and specular iron ore for any three minerals 2x2. C. R. NORTH,

Chestnut Hill, Philadelphia, Pa.

* *

Wanted—A good folding ring insect net, will give L. and F. W. shells, minerals, and western bird skins. Would also like manuals of geology, ornithology, conchology and herpetology.

AURELIUS TODD,
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* *

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Box 101, R. D. Goss,
New Sharon, Mahaska Co., Iowa.

LIFE IN THE CHUCKAWALLA MOUNTAINS.

The Chuckawalla mountains form a portion of the Colorado Desert, occupying the northeastern part of San Diego county, Cal. They are most appropriately named the Chuckawalla or Lizard mountains, for lizards certainly there predominate in the animal kingdom both in variety and numbers—possibly it would not be desirable to lead a long life in any other form. No snakes were seen during a week's stay in July this year, but probably a longer sojourn would have resulted in as great a variety as I should have cared for in that line. Several species of rattlesnakes as well as various harmless snakes are said to reside in these mountains, but they did not call on me. A single 'side winder' rattlesnake was found on the plain near the railroad station as I was about to depart, but he was not anxious for a further acquaintance—neither was I.

Mountain sheep, deer and antelope are said to abound among these mountains, but I only had a glimpse of a mountain sheep; one meal of venison was enjoyed—thanks to an Indian's skill in hunting. Several beautiful pairs of mountain sheep horns were also seen, but no opportunity presented for stealing them.

Around a few old Indian and prospecting camps I was tantalized with finding fragments of the shell of the dry land tortoise, but no sign of one in the flesh rewarding my search in all my wanderings. Fish transplanted from the Dos Palmas spring seemed to be doing well in the

spring at the mining camp.

Coyotes, jack rabbits and cotton tails were not rare, considering the number of acres they must require for support. A flock of young quail near the camp during my stay are worthy of mention. Few other birds were observed, but a few bats and night hawks sailed around us evenings, catching what few insects they could that I had not caught during the day—altogether I believe they were more successful, certainly more persevering than my self. Bees were noticed in great numbers on the Dalea bushes that were covered with their indigo blue blossoms at the time (early in July).

The last Indian had disappeared from these hills (we met him going toward San Bernardino); four weary mules, a dog, and half a dozen examples of the genus Homo, complete my monograph on the life in the Chuckawallas—no, I forgot, the mosquito is worthy of respect.—*West American Scientist.*

[P. S.—The prospector's long-eared friend, the patient burro, wants to be remembered. He eagerly devoured every word in the *Young Men's Journal*—paper and all.]

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CONTENTS:

Natural History—Part IV.....	13
Wild Birds.....	14
Fossil Resin.....	15
Coins of Nova Scotia.....	16
The Collector in Mexico.....	17
A Rich Discovery.....	18
Indian Carvings.....	19
Humming Birds.....	20
Some Notes on the Cray-Fish...	21
Exchange Notes.....	21

E. M. HAIGHT, Editor and Proprietor.

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September list just issued! Cheapest in the U. S.

Every dealer should send for a list.

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Will bring you by return mail a large bundle of Story-papers, Novels, Magazines, etc., etc. They are not cheap publications, but the highest grade.

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RUBBER STAMP with your name in fancy type, 25 visiting cards and INDIA INK to mark linen, only 25 cents, (stamps.) Book of 2000 styles free with each order. Agents wanted. Big pay.

THALMAN MANUFACTURING COMPANY,
BALTIMORE, MD.

The Bay State Oologist

Is a finely printed Monthly Magazine devoted to the Student of Birds, their Nests and Eggs.

It has a large and varied list of contributors and is devoted to all collectors of Oological specimens, either young or advanced.

Subscription price, 50 cents per annum in advance.

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Send a 2-cent stamp before April 1st and receive a Sample Copy.

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S. JACOB, NATURALIST.

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When answering advertisements, please mention 'The Old Curiosity Shop.'

The ♦ Old ♦ Curiosity ♦ Shop.

VOL. VIII. No. 2.

NOVEMBER, 1888.

WHOLE No. 40.

NATURAL HISTORY.

PART IV.

While speaking of botany it would be wrong to omit speaking of one who has been called the "Father of Botany." Carl von Linne, or as he was commonly called Linnæus, was born on the 28th of May, 1707, at the village of Rooshoolt, in Smaland, a province of Sweden, where his father, Nicholas Linne, was clergyman. He entered as a pupil at the University of Lund, and about the years 1727-28, was received into the house of Stobæus, a physician in that city, where he had abundant opportunities of prosecuting natural history. He afterward proceeded to Upsal, and had to struggle with great difficulties while studying there. He aided Celsius in his *Hierobotanicon*, or account of the plants of the Scriptures, and he became assistant to Rudbeck, Professor of Botany. He afterwards traveled in Lapland, took his degree in Holland, visited England, and commenced practice in Stockholm, where he lectured on botany and mineralogy. He finally became Professor of Botany at Upsal, and was one of the most popular lecturers of the day. He died on the 8th of January, 1778, in the seventy-first year of his age. His herbarium is now in the possession of the Linnæan Society. After dealing with the inorganic branches of natural history and the first branch of the organic bodies, we next turn our attention to those organized bodies that have the power of motion. Zoology (from *zoon*, an animal, and *logos*, a discourse) is a branch of natural history, and is itself divided into a number of branches pursued as distinct sciences, the subject being

too vast to be thoroughly studied in any other way. It is necessary, though, that the results of investigations in particular departments should be brought together so that the whole animal kingdom may be viewed as a whole and the relation between widely different groups of animals to each other be determined. The number of species of animals is far greater than that of plants, and the diversity among them is also greater, so that a division of the science of zoology into branches relating to different groups very naturally takes place. We give names to these different subjects corresponding to the object studied, viz: studies having mammalia for the principal features are called *mazology*, (from *mazon*, a teat.) This is not a satisfactory name however, a curious circumstance being, that what may be called the highest branch of zoology, has no popularly received name. Studies of birds are those known as *ornithology*, that relating to reptiles is *herpetology*, that to serpents, *ophiology*, that relating to fishes *ichthyology*. Among invertebrate animals the great group of *mollusca* is the subject of the science of *molacology*. This term is not generally used. Among shells the term *conchology* is employed. Those branches relating to insects are universally known as *entomology*, and the term *helminthology* is applied to the study of worms. Physiology is one of the most important branches of zoology, and with it is closely connected that branch of chemistry which treats of animal substances. Up to the time of Aristotle the study of zoology was not prosecuted to any extent. In his hands it became a science, and a foundation of a system of classification was laid. No

artificial system of classification like the sexual system of Linnæus was ever proposed. Aristotle divided them into two classes, the highest having red blood, the lowest having a colorless fluid instead of blood, the former corresponding to the vertebrate, and the latter to the invertebrate of modern zoologists. In the study of zoology far more attention has been paid recently than formerly to the relation which each part of the animal organization bears to the whole, as the respiratory system to the circulating system, the digestive system, the nervous system, etc. The study of the science has become more philosophical, and the view obtained of nature more complete, and if the difficulty of classification is found greater than when characters, derived from the particular parts of the organization, were more exclusively regarded, the result, when fairly wrought out, is a system at once more perfect and more natural.

C. S. MASON.

—:O:—
WILD BIRDS.

(Family **Leoniidæ**, Butcher
'Birds.')

—
PART III.

This family of birds receives its name from its general habit of hanging its victims on a thorn of a bush, or a sliver of a fence, while it tears it to pieces and devours it. There are some four species of this family, all of which belong to the same genus; found in North America, and of these three are reckoned among the "Birds of Ontario," but it is disputable whether the two smaller members of this genus are not simply sectional variations of the same species. In general appearance and habits, there is a strong family resemblance.

The Northern Butcher Bird.

(*Lanius Borealis*.)

This bird appears to make its summer home and nesting place in those vast regions of the Canadian Domin-

ion which lie to the north and west of the province of Ontario, though it is probable that some of them may nest and rear their young in the district of Muskoka. In its general appearance it closely resembles the more common white-rumped butcher bird, or shrike, as it is also called, and which is resident in Ontario from early spring till late in Autumn; and it requires a close examination in order to distinguish the difference. Upon a close inspection, however, it will be found that the *Borealis* is over an inch longer in size of body, and lighter in color, than the other species. The northern shrike is between nine and ten inches in length, and the extent of each wing about four and a half inches. The plumage on the upper parts of the body is bluish-ash, with a black bar on the side of the head; the wings and tail are black, and the lower parts are white. When it is standing on a perch the tail jerks nervously to either side. It usually makes its advent in Central Ontario late in autumn, or about the first snowfall; and except in very cold weather is commonly observed in all the winter months. It is more often observed singly than otherwise, though sometimes it is observed in pairs, and more rarely in parties of four or six. It may often be observed sentinel-like, standing on a high post, the top of a bush, or a tall tree, from whence it has an extensive view of its surroundings, and from such positions it often darts off like a flash after some unfortunate small bird, which it frequently hunts down and captures by its superior speed of flight. Sometimes it will take its stand on a high tree in the woods near where timber is being cut down, and where flocks of cross-bills and others of our small winter birds are feeding among the evergreens, and in its own peculiar style begins to discourse sweet music, evidently with the design of deceiving its feath-

ered audience, until an opportunity occurs of making one of them a victim to its hunger, now rendered doubly keen by the freezing blasts of winter. And when it has secured its prey it flies off with it in its bill or claws, like a little falcon, to some suitable spot where, undisturbed, it can feed at leisure.

Of late years the English sparrow furnishes many a repast to this bird in the winter season, and it would be a matter of congratulation if it would succeed in almost exterminating this increasing pest. The nest and eggs of this species are said to be much similar to those of the white-rump species, except that they are a little larger in size.

WM. L. KELLS.

(*To be continued.*)

FOSSIL RESIN.

We find a hard, brittle substance, classed by Dana as an "oxygenated hydro-carbon," or mineral resin known as amber.

But amber is a fossil or petrified resin; formed in one of those long geological ages long ago, somewhat as resin is from the pine to-day.

Pliny said that it was an exudation from trees of the pine family.

Amber is generally of a yellow color, passing from a light straw to orange, but it is also sometimes red or brown.

It is sometimes perfectly transparent, but more frequently translucent.

Amber was held in high repute by the ancients, both for articles of jewelry and ornamental purposes.

It was believed by the Romans that a necklace of amber beads hung around the necks of infants prevented them from secret poisons.

The Greeks tried to account for amber by a fable or myth, purporting that the Heliadæ, on seeing their brother Phaethon hurled by the lightning of Jove into Eridanus,

were by the pitying gods turned into poplar trees, and the tears they shed were dropped as amber on the shores of the river.

Thales of Miletus, one of "the seven wise men of Greece," observed that amber when rubbed with a cloth would attract light bodies, as bits of straw, feathers, etc., and on this simple observation the modern science of electricity was founded.

We have no idea at what time nor by whom amber was first discovered; we find it first mentioned in the Odyssey of Homer where, speaking of the jewels offered by the Phœnician traders to the Queen of Syra, he says "The gold necklace hung with bits of amber."

The most abundant supply of amber is obtained from the shores of the Baltic, where it occurs in regular veins.

On the Prussian coast are mines for obtaining and working it.

According to Dana "It has been found in various parts of the green sand formation in the United States, either loosely embedded in the soil or engaged in marl or lignite, as at Gayhead, on Martha's Vineyard, near Trenton, and also at Camden, in New Jersey, and at Cape Sable, near Magothe river in Maryland.

When rubbed or burned amber emits a very pleasant odor, and great quantities are consumed at Mecca by the pilgrim followers of Mohammed.

The value of amber depends on its color, size, and luster.

In 1576 a mass found in Prussia; and weighing eleven pounds, was presented to the emperor.

A piece in the royal cabinet at Berlin weighs eighteen pounds; other large pieces of twelve or thirteen pounds weight have occasionally been found, but are extremely rare.

Pieces of amber are sometimes found containing fossil insects, leaves or twigs. These are rare, and col-

lectors have been imposed upon by fraudulent imitations.

Amber is used now chiefly for mouth pieces of pipes and cigar holders, and in making a kind of varnish.

WESLEY GEORGE.

COINS OF NOVA SCOTIA.

All numismatists who are interested in Canadian coins, will find that the coins of Nova Scotia form an interesting series by themselves. There are about thirty varieties in all, several of which are quite rare. As far as we know Nova Scotia has only a copper coinage, consisting of pennies, half-pennies and tokens. There is, occasionally, a variety that was coined several years, bearing the date of the coinage.

No. 1 is a penny piece with a milled edge, bearing the dates of 1823-24-32. Obverse, head of George IV, surrounded by "Province of Nova Scotia." Reverse, a thistle in full bloom: above thistle, "One Penny Token;" below date 1824 or 1832. We never saw the coin with the date 1823.

No. 2 is the same as No. 1, except the head of Victoria takes the place of George IV. This coin is dated either 1840 or 1843.

No. 3 is a half-penny piece with the same obverse and reverse as No. 1, and was issued in 1823-24-32.

No. 4, a half-penny, has the same obverse and reverse as No. 2, and was coined in 1840-43.

No. 5, a penny token, has for its obverse a crowned head of Victoria, surrounded by "Victoria; D; G; Britannia; Reg; F; D; date 1856 under bust, only issued that year. Reverse, may flower in center "Province of Nova Scotia" above and "One Penny Token" beneath.

No. 6 is a half penny token of the same date and design as No. 5.

No. 7 is a copper cent issued in 1861-62-64. Obverse, head of Victoria, crowned with a wreath of

leaves, surrounded by the same words as No. 5, in an abbreviated form. Reverse, crown in center, order which is a line and date, surrounded by a beaded circle and a wreath of flowers; above "One Cent," below "Nova Scotia."

No. 8 is a half cent of the same design as No. 7, and coined in 1861-64.

No. 9. Obverse, head surrounded by a circle; outside of it are the words "Half-penny Token;" below, date 1814. Reverse, a large building, surrounded by "Payable by Hosterman & Etter, Halifax."

No. 10. Obverse, head to right same as No. 9; no circle around head, date 1815. Reverse, similar to No. 9.

No. 11. Obverse, the same as No. 10. Reverse, a ship under full sail, and motto "Success to Navigation and Trade."

No. 12 is smaller than No. 11. Obverse, similar to No. 11 with same date. Reverse, ship under full sail, surrounded by "Payable by John Alexander Barry, Halifax."

No. 13. Obverse, same as No. 12. Reverse, ship under full sail, with the word "Halifax" underneath.

No. 14. Obverse, same as No. 12. Reverse, a seated figure, "Genuine British Copper."

No. 15. Obverse, a barrel in center, surrounded by a circle; outside are the words "Half Penny Token," and the date 1815. Reverse. In center are the words "Payable by Miles W. White, Halifax, N. S.," surrounded by a circle; all surrounded by the words "Importer of Ironmongery, Hardware, etc."

No. 16. Obverse, head facing the right, surrounded by "Half Penny Token," 1814. Reverse, ship under full sail, surrounded by "For the convenience of trade."

No. 17. Obverse, the same as No. 16. Reverse, ship under full sail, surrounded by "Payable by Carritt & Apoort," Halifax.

No. 18. Obverse, "One Farthing," Payable at W. L. White's, Halifax House, Halifax. Reverse,

"Cheap Dry Goods Store," in center," surrounded by "W. L. Whites, Halifax House, Halifax."

No. 19. Obverse, head of General Broke facing left; above it the word "Broke;" below, "Halifax, Nova Scotia." Reverse, seated figure, with the word "Britannia" above, and date 1814 below.

No. 20. Obverse, ship under full sail; above, "Half Penny Token;" below, "Nova Scotia." Reverse, Indian and dog, surrounded by "Starr & Shannon, Halifax," and date 1815.

No. 21. Obverse, the same as No. 20. Reverse, Indian and dog, surrounded by "Commercial Change," and date 1815.

No. 22. Large building surrounded by "Wholesale and Retail Hardware Store," and date 1816. Reverse, two shovels, one sickle, one scythe, and one barrel of nails, surrounded by the words "Halifax" and "Nova Scotia."

No. 23. Obverse, the same as No. 22. Reverse, the same as No. 22, except the words "Payable at W. A. & S. Black's, Halifax, N. S.," surround the tools advertised on the coin.

No. 24. Obverse, a large thistle, surrounded by the motto "Nemo me impune laces sit." Reverse, ship under full sail. Around the ship are the words "Payable at the store of J. B. Brown."

No. 25. Obverse, ship under full sail, surrounded by "Nova Scotia and New Brunswick" under the ship is the word "Success." Reverse, a seated figure, surrounded by "Half Penny Token."

No. 26. Obverse, "Encourage country importers." Reverse, Robert Purvey's Cheap Family Store, Wallace."

No. 27. Obverse, "Ferry Token." Reverse, steamship, surrounded by "Halifax Steamboat Co."

The above coins, with the exception of a few minute varieties, which probably cannot be obtained at any

price, represent the coins of Nova Scotia. We hope this list and description will be of help to some young collector who is striving to make a good collection of the coins of Canada.

E. G. WARD.

—:O:—

THE COLLECTOR IN MEXICO.

PART I.

If there is anyone who supposes that there is lack of appreciation on the part of Mexican scholars of the relics of the early races with which the soil of Mexico abounds, such a one is laboring under a sad mistake. The city of Mexico is a great center of archæological study—greater than is generally known. The archæologist works there under peculiarly favorable auspices. Not only is he upon the most productive ground, so to speak, in the world, with means readily at hand for the pursuit of his studies, but he is under the patronage of a government which, however lax it may be in the payment of its debts, cannot be accused of parsimony in regard to its encouragement of the two great studies, for which its territory furnishes such unbounded facilities—archæology and ethnology. These scholars, therefore, backed by the government, jealously guard every excavation made in the land, and eternal vigilance on their part has been the price of some of the objects now lining the walls of the rooms devoted to "antiquities" in the National Museum.

Still, this is no reason why the private collector should be frightened off from attempting to secure something from Mexico representing the races antedating the Conquest. He would certainly be rewarded by a visit to Mexico, and it is only necessary for me to give some hint as to what he is to do when he gets there, in order to succeed somewhat in his quest for relics of the prehistoric races. There is much to be guarded

against, principally of the nature of deceptions practiced upon novices and upon the unwary. Some of the basest of frauds are practiced by the most innocent-looking natives in the very places where the collector would least expect that a knowledge of the value of prehistoric relics had penetrated. I have seen an ordinary peon glance over his shoulder as if fearful that he was being watched by the curator of the National Museum, and then furtively draw from the folds of his *sarape* a clay image, which would be eagerly bought by a novice for five dollars, under the impression that he was securing a prehistoric relic. Whereas the curator of the Museum, or any experienced collector, would know at a glance that the clay image was a thing of yesterday, and was not worth a dollar. The private collector should know at the outset that objects thus offered are to be regarded with suspicion, for it pays the *peon* far better to sell all he finds to the government than to find a private purchaser for them.

Cigar dealers who have in their stores "Aztec flutes" are also to be avoided. These are grotesque clay whistles which, if not bought too dear, are worth possessing as library ornaments, as illustrations of the Aztec styles of decoration, for they are good copies of antiques. But they are by no means to be received by collectors for what they are not. In short, the government is far too good a customer for any such wares as these claim to be, to seek purchasers elsewhere. So that the collector can only rely upon such articles as he himself digs from the earth. And in this he must exercise great caution. Care must be taken in the selection of a locality. Several localities might be suggested within easy access of the City of Mexico. Of course those where excavations are going on under the control of the curators of the National Museum are to be studiously avoided. The col-

lector must furthermore be content with fragments, and he must not hastily throw anything aside until he has deliberated over it and fully determined its value. Great will be his toil. But his reward is also likely to be great.

As to relics of the different periods succeeding the Conquest, less difficulty will be experienced. Old curiosity shops abound in the City of Mexico. But these are to be approached with caution. They are not now what they were five years ago. The stock has diminished and prices have gone up. Besides that, the dealers have learned chicane. The old junk shops are still the best places. But even there the collector must be alert. He must have a varied knowledge, for the objects of his search will be various. And he will find himself in competition with all the experienced collectors and all the dealers in relics in Mexico. Still, nothing should be said to discourage the attempt. The search is in itself fascinating, and even if unsuccessfully pursued as regards the possession of relics, it will prove instructive. And, besides, "It is better to have loved and lost, than never to have loved at all," a sentiment which every enthusiastic collector will heartily echo.

ARTHUR HOWARD NOLL.

—:O:—

A RICH DISCOVERY.

PART III.

I cleaned off the dirt, and found it was some kind of a chest, and opening it by taking off the rotten plank cover, I saw there were books and manuscript records in it. My shouts to mother soon brought her to the spot. Taking out the books and papers, I passed them up to mother. Under the papers I found another box, and this was heavy and almost all I could lift up on the bank above my head. In tipping it I could hear

the clinking together of the coin, and I was so excited I hardly knew what to do. But I passed up the balance of the contents of the chest: Two short French swords, two curious pistols and several other things. Between mother and I we took the small chest to the house; and I pried off the fastenings and opened the lid. It was gold, and the same kind that I found before, only these were clean and nice. Here are six of them, Mr. H., and will you give me \$3 each for them?" I examined them. They were old French *Louis d'Ors*, worth \$4 or over of United States gold; and I told Harry that I would give him \$4 for every one of them. A happier youngster I never saw. I ordered a horse and carriage and drove immediately out to the plantation. In the presence of the lady and her children I counted out the gold pieces—just 1,343—and I gave Harry a certificate of deposit in the name of his mother for \$5,372. Before sunset we had the money in the bank vaults, and saw Harry start homeward with quite a load of comforts that must have come at a timely moment. They have never been wanted since, and to-day no better conducted plantation can be found than Harry M.'s, or one better looked after or more profitable. Its years of idleness gave new strength to the soil, and the flourishing crops attest the thoroughness of culture and that a master-hand is guiding all. Others have dug over the old fort until they have nearly obliterated it, but no more *Louis d'Ors* have greeted the eyes of the expectant seekers.

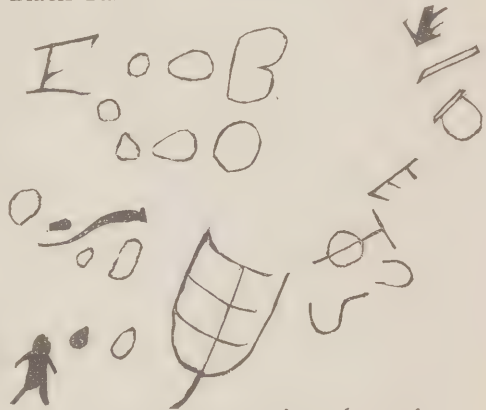
J. G. BRIGHAM,

INDIAN CARVINGS.

The Chuckawalla mountains form a part of the vast region called the Colorado desert, and are located in the north-eastern part of San Diego county, California.

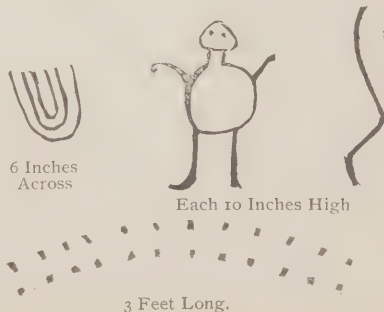
About thirty miles from Salton, a station on the Central Pacific R. R.,

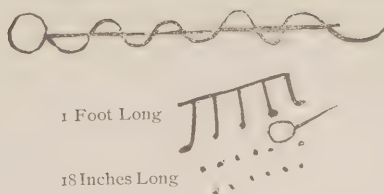
and near the centre of the Pacific Mining District, there is a smoothly worn rock bearing on its nearly perpendicular face various Indian signs. I give below a rough sketch of the figures engraved upon this rock, as I found them June 7th. It is beside an old Indian trail at several natural water reservoirs locally known as the Black Tanks:



These signs were cut into the rock about half an inch, and were two to six or eight inches in height, and all very distinctly cut. Those near the character resembling a large capital E were nearly effaced by the weather and could not be accurately outlined.

Ten miles from this rock, at Cohn springs, I was informed that a number of rocks were similarly inscribed, with a much greater variety of designs, but I was unable at the time to visit the locality. My companion, Mr. W. F. Hendsch, kindly outlined a few of the characters for me, which I give below:





The above are signs selected at random from the great variety that he had observed on the rocks. The size is approximately indicated. He had been informed that they were intended to indicate the different localities where water might be obtained in that region, a straight line attached to a circle representing the trail leading to a tank or pool of water, the circle alone standing for a natural water tank or reservoir or for a spring. The figure above given where the straight line is crossed by a winding one was intended to describe a short cut to the water; the trail (straight line), leaving the wash or ravine and going across a divide a number of times, thus lessening the distance to the water, instead of following the natural course of the wash.

C. R. Orrell.

HUMMING BIRDS.

BY S. ESTLE MILLER.

In all the field of oology, there is no group of birds so interesting to the naturalist as the humming bird. Its size, its gorgeous colors and the abundance of different species, have given this small bird a pre-eminent position among the feathered tribe. The continents and islands of America are its home, and no other country can boast of a single species. It may be found all the way from the Arctic regions, of the chilly north, to Patagonia in the south. They are more numerous in the West Indies and Central America than in any other part of the continent, and it is here that the most beautiful are to be found. The tiny

crest of one of these shines like a sparkling crown of colored light, while the colors adorning the breast are equally brilliant.

The species of the humming bird family now number more than three hundred, and through the energy of naturalists, this number is being increased every year. These birds have taken their name from the soft, humming noise made by the rapid motion of their wings. It is claimed by some that this sound differs in different species, and often to such an extent that an observant ear can detect the species by this noise produced in its flight. One of the very common species here in Ohio is the ruby throat, which takes its name from the feathers that encircle its throat and shine with a ruby lustre.

The humming bird arrives here in Ohio about the 5th of May, each year, and usually comes in pairs. They begin their nest-building about the first week in June. Not long ago, when out walking, we found the nest of one of the smallest of these birds. It was about half the size of a hen's egg, and was swung to a twig about the thickness of a knitting-needle. It was made of cotton fibers and the down of certain plants, and was covered with small bits of leaves and soft bark. The eggs, two in number, were white, elliptical in shape, and of nearly the same size at each end.

The naturalist Audubon discovered a very curious habit belonging to these birds, and one that he concluded was resorted to in order to conceal the whereabouts of their nest. It was this:

While watching the nest of one he saw the female bird suddenly leave its station on a neighboring limb and shoot perpendicularly into the air until it was lost from sight. After a few moments of patient waiting, he had the pleasure of seeing it descend and alight directly upon the spot where she had constructed her nest.

INDIAN MILLS.

It is a well known fact that the Indians raised corn. They certainly had a way to grind or mash it. It is supposed by some that the mortars sometimes found, were used for this purpose; they may have been used in this way, but it is more probable that they were used for pulverizing roots, etc., by pounding with a pestle, for medicine. I have found several pieces of stone, with rounded edges, about two inches thick, and worn very smooth. The whole piece had been about thirty-two inches in circumference. The other part was made of stone shaped like a very shallow mortar, and made to fit the buhr loosely, the corn being placed between them, and ground by hand, something after the style of ancient Egyptian grinding. The stone of which the buhr was made was hard and granular, and when two pieces were struck together, like flint, they would "strike fire." This kind of a mill was used by the Catfish, and perhaps also by the Mohawk, Indians in Southwestern Pennsylvania.

—:O:—

SOME NOTES ON THE CRAY-FISH

(*Astacus Fluviatilis*.)

The cray-fish is sometimes called the fresh water lobster on account of its resemblance to that crustacean.

In the spring, about the middle of March, when the female cray-fish comes forth from its winter quarters, it has attached to the under part of its tail numerous eggs fastened to small filaments; these eggs are of about the size and color of hemp seed.

These it carries about until sometime in May or June, when they hatch; but they still continue to cling to the filaments until they have gained sufficient strength to start out

alone, they are then about $\frac{1}{4}$ inch long.

While young they grow more rapidly than when they are more advanced in age, they grow a little more than an inch in the first year.

Speaking from personal observations they grow to be about four inches in length when they have obtained their full growth.

The mouth is situated directly in front of where the large claws join the body, and is marked by a pair of jaws running parallel to each other and pointing forwards.

It sheds its shell every few weeks even to the covering of its eyes, after which it is soft for two or three days, it grows only during this state.

While in this condition it conceals itself beneath weeds and stones, because it is now defenceless.

The shell begins to form and is hardened at the end of about four days, when it regains its old confidence.

The cray-fish has the power of reproducing its limbs, when it has lost one through some accident.

Take it all in all they are very interesting, and there is always something new to be found out about them if they are closely watched and studied.

E. STARKS.

—:O:—

EXCHANGE NOTICES.

This column is for the use of subscribers only. Exchange notices must be in by the 15th of the current month to insure insertion in following number, and must be written on separate piece of paper. No postal cards noticed.

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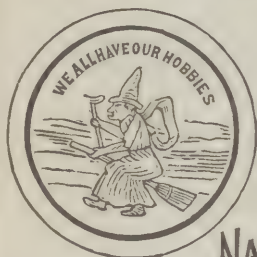
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CONTENTS:

The Collector in Mexico.....	25
The Crossbills of Michigan.....	26
Coins in Canada.....	29
A New Florida Bulimulus.....	31
Editorial.....	32
Review Table.....	32
Geology.—A Series.....	33
Exchange Notes.....	33

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VOL. VIII. No. 3.

DECEMBER, 1888.

WHOLE No. 41.

THE COLLECTOR IN MEXICO.

PART II.

One bright November day—and bright days are not rare in November in the Mexican capital—the collector set out to delve in the soil upon which one race of men had succeeded another during the last six centuries at least, in search of some relics of an age antedating the European settlement of the country. He went at the invitation of a friend who said “I know a bank”—he could not say “whereon the wild thyme blows, where the ox-lips and the nodding violet grows,” but he could and did say, “into whose sides we may dig and find relics of a by-gone time.” We accordingly went a short distance beyond the northwestern borders of the present City of Mexico to the neighborhood of an old church known as San Miguel de Nonoalco. Nonoalco is by no means an uncommon geographical name in Mexico. There are several small settlements of the name within the circle of the mountains which shut in the valley of Mexico. It is a suggestive name. It means “the place of the Nahoas,” and “the Nahoas” is a name given by some writers to a very early race occupying the land whereon the Mexican now lives. The question at present seems to be, “Who were the Nahoas?” Ethnology is by no means an exact science in Mexico, and having traced the occupants of the country back from the Aztecs to the Toltecs and back from the Toltecs to the Mayas and Quiches, and finding evidences of a race still earlier, the pursuers of ethnic studies seem to have named them the Nahoas, and are now devoting their attention to discovering whence they came. Nonoalco evi-

dently at sometime has received that name because it has exhibited proof that it had been occupied by the Nahoas. Here, if anywhere, we thought, would we find the opportunity to disprove what a recent writer has asserted, that no spot remains about the city of Mexico showing a trace of any edifice prior to the Spanish Conquest.

Before reaching the bank where we were to dig, we paused for a time upon a slight mound and collected a large quantity of obsidian chips. Here was evidently a sort of manufactory of the implements of Aztec warfare—the arrows, knives, and more particularly the *maquahuatl*—the terrible club studded with spikes of this volcanic glass. We could only find chips on this site of the Aztec armory, though we searched diligently for an arrow-head or a *maquahuatl* knife. I found but one good arrow-head of obsidian in Mexico. That I picked up one day on the side of the pyramid of Cholula.

But we were in search of relics of a race long antecedent to the Aztecs, and proceeding on our way we reached a pit in which *adobes* had recently been made. Our attention was at once directed to the perpendicular wall of this pit. There we found two strata of earth, the lower somewhat darker than the upper and partially composed of ashes. Mixed with the soil of each stratum were fragments of pottery without number. More widely different than the colors of the soil of these two strata were the characteristics of the pottery fragments found in each. In the lower stratum the fragments represented the crudest period of the potters' art. They gave evidence that the various vessels which they had once composed were of ungrace-

ful shapes, (irregular cones) having rough surfaces as if formed upon gunnysacks or coarse *manta*. Finger marks were visible in some. In color they inclined to terra cotta upon the surfaces, but the baking seemed to have been irregular and between the surfaces they were dark gray. The upper stratum not only displayed a higher grade of workmanship but was capable of subdivision. The work improved as it ascended. The vessels, of which we found fragments, varied in form. Low down they were of the shape of the *olla* still in use in Mexico—that is, spherical, with a large, flat neck. The surface was reddish-brown, and evenly polished. Others higher up were lighter in color, and were cup-shaped and well made. Nearer the surface of the ground we found specimens of the highest style of Mexican pottery—a great variety of forms, some very graceful, and almost all with glazed surfaces. These have been assigned to a period in which Spanish influences prevailed. Pigments have been applied to the surfaces before glazing—black, white, and dark red—and now and then a fragment was to be found having highly artistic designs, in the Greek style.

What was to be deduced from these strata and their contents? We were of divided opinions. To one of us—deeply impressed with the significance of the name Nonoalco—the place of the Nahoas—this bank spoke of succeeding races—the habitation of the earliest overwhelmed perhaps by an eruption of Popocatepetl, and buried in ashes. The clay of the neighborhood may have furnished such rare facilities for the pursuit of the keramic art, that the potters of the succeeding races had naturally selected it as their homes. But the other had another theory. As *Atzacapotzalco* was the slave market of the Aztec capital and *Tlatelolco* was the jewelers' quarter of the city, may not Nonoalco, under some

other name, have been the quarter of the city given up to the potters? It may have been their factory—in which case the different styles of workmanship may have represented the growth of their art—the development of their skill. Or the locality may have been set apart as their market. In which case the different grades of pottery may have represented different localities. Cholula was famed for its fine pottery, and specimens have been found near Cholula resembling some of those discovered at Nonoalco. But whichever theory be true, we spent a delightful day at Nonoalco and came back laden with spoils. Perhaps others would see very little in the fragments we secured, but they certainly represent a period earlier than the Conquest, and perhaps a period antedating the Aztec invasion. Yet this was by no means a "red letter" day for the collector in Mexico. It would be difficult to say which of his days were ruddy-hued. Perhaps one of them was that on which he gathered specimens of sulphur from out of the crater of *Popocatepetl*. Another, doubtless, was when he stood upon the pyramid of Cholula. But of black letter days the collector's calendar may be as full in Mexico as he pleases—quite as full as the Mexican ecclesiastical calendar is of saints' days.

ARTHUR HOWARD NOLL.

—:O:—

THE CROSSBILLS OF MICHIGAN.

BY R. M. GIBBS, (Scolopax.)

Two species of these singular birds are found in our State, but only one is well-known to nearly all collectors, the white-winged crossbill being a straggler from the north, and only occasionally seen in winter, in company with its more abundant relative, the common red or American crossbill. It may be well in this article to

mention a few facts regarding the white-winged species, as it is but little known to the majority of collectors, and though the notes here presented are mainly upon the common species, it is but proper to embrace both representatives of the genus in this connection.

LOXIA LEUCOPTERA GMEL.

(White-winged crossbill.)

This species is embraced as a Michigan bird by thirteen published lists, in nineteen now before me. It does not appear to have been recognized by the earlier writers, and is not recorded by Sager in his pioneer list of 1839. First listed by Cabot in his list of birds of the upper peninsula in 1850. Most lists give it as "a rare winter visitor," or "an irregular visitor in winter." The writer's notes though taken with great care for a period of over twenty years do not afford any observations of value, beyond a few remarks on flight, feeding and general movements, in which the white-wing so nearly resembles the common crossbill that a separate description is unnecessary.

Nothing that I have so far learned, has ever been discovered of their nesting habits in Michigan, and it is to be doubted if the species ever breed in the State. In northern trips, during which careful notes were taken, not a bird of this kind was ever recorded in the upper peninsula, or even north of our State line, in the British possessions, where I have carefully looked for it. Rarely seen in the southern part of the lower peninsula and only during seasons when the following species is common. More often observed while here in single or small numbers in company with the common species, but occasionally seen in small flocks of ten or less in the winter. The species certainly do not appear as early as the red crossbill or remain as late in the spring.

LOXIA CURUIOSTRA MINOR, BREHM
(American, common or red crossbill)

A common resident in pineries, from 44 degrees north latitude, north, migrating through the southern counties at certain seasons at irregular intervals; often remaining during winter or a portion of the cold weather, and again not seen for several seasons together. One of those peculiarly restless birds which one can never find when wanted, and like the cedar bird in some quarters, as well as many other species, not to be relied upon in their erratic journeys. After a long acquaintance with the red crossbill and a careful study of the species in its habits, as well as investigation of the internal anatomy of many specimens during a number of months of the year. I am still unable to say at what season of the year their nesting occurs. The certainty that the birds were rearing their young in the neighborhood of my researches, was, to me, frequently, almost positive, but the most careful search invariably failed to find the nests.

The red crossbill is abundant north of 45 degrees, and undoubtedly is found resident in the extensive pineries of central and northern Michigan. The species has been observed by me every month in the year at about 43° 35' north latitude, while to the south, as far as the southern boundary, once in every three years, perhaps, the crossbills are seen in greater or less numbers. Sometimes appearing in vast flocks of many hundreds, and again in small detached groups of five to fifty, these birds, always, so far as my observations extend, are gregarious. The flocks as observed in spring, and until June, and in the fall, seasons when they are most noted in the north, are composed of six or seven individuals, quite probably constituting a family, old and young.

These peculiar birds are naturally retired in their habits, preferring

deep quiet pineries, where, at most seasons of the year, when the snow is not too deep, they may be found feeding on the ground among the dead leaves. At these times they may be easily approached, and when disturbed only fly to the lower limbs of the nearer trees, occasionally uttering their odd notes and strangely eyeing with perfect confidence the intruders upon their solitary, solemn domain. The flight of the crossbill is never rapid, but somewhat exceeds in swiftness the usual flight of *fringilline* birds. This description, as in fact all others in this article, equally applies to both representatives of the genus. The undulations, or as we may call them flight waves, of this bird much resemble the peculiar rise and fall of our goldfinch and the nearly allied pine siskin, but are not so marked, while the flight is more vigorous. The flight is heralded, as with *astragalinus* by the notes, and a flock of crossbills can be predicted as readily as an approaching flock of thistlebirds, by one with a practiced ear. The flight is often very high, and frequently the quaint notes are the only evidence of the passage above us of a flock of, probably migrating, crossbills.

The notes are decidedly characteristic, and are unlike any other bird's known to me. The white-winged crossbill has ever been silent when I have met with it, never giving utterance to a sound, and so it is impossible for me to say if their notes resemble the noise made by the red crossbill, the notes of which much resemble the sound *cleep*. This *cleep* is uttered generally three times in succession, but sometimes four times and even five. It can be readily conceived, therefore, that a flock of twenty birds or more easily make enough of noise by their constant "cleeps" to quickly attract a practiced ear.

The food of the common crossbill is much more varied than is generally supposed. My attention was

first called to their omnivorous diet by observing a flock feeding in an old dead pine. The season of the year was midsummer and at a very dry time. The great pine was standing alone, the reason of its being undisturbed by the axe of the merciless woodsman probably arising from the half-dead condition in which it was found. Over twenty crossbills were engaged in prying off the bark and greedily feeding on something found beneath. To satisfy myself of the nature of their repast a large strip of the bark was torn loose, disclosing myriads of the winged or mature forms of ants, and many kinds of small beetles, both in the larval and imago states. The crops of several of the feasting birds were filled to repletion with this insect food.

It was a matter of surprise to me to see how these small birds could tear off large pieces of bark in so rapid a manner, by inserting their peculiarly formed bills between the bark and wood. It is very interesting to watch a crossbill feeding from the cones of a pine. With its powerful beak, which it uses with leverage power by prying, the seeds of the cones are made to drop in a perfect shower. In the winter in cities the birds have been observed to feed on frozen, decayed apples and one was seen acting the scavenger in a barrel filled with refuse.

It is most singular that no one in the State, that it has been the writer's good fortune to meet, has yet learned anything about the nesting habits of this bird. From careful dissections, made in the months of March, April and May, the writer has been unable to ascertain the season of vidification. however, the plumage brighter in May than at earlier periods of the year, would indicate that nesting may take place at a later time.

In reference to the colors changing in the American crossbill, T. M. Brewer in foot notes to the 1852 edition of "Wilson's American Orni-

thology" says: "The fact is, that the young or all crossbills, contrary to the generality of birds, lose their red color as they advance in age, instead of gaining an additional brilliancy of plumage. The figure which our author gives as that of an adult male, represents a young bird of about one year, and his supposed female is a remarkably fine adult male."

It seems strange that the vernal enlargement of organs found changed seasonally in most birds should not be found so in loxia, and the almost convincing assertion of a friend that the crossbills breed in late January and early February is seriously considered.

Our friend is perhaps not so far wrong if we are to accept the testimony of many of our best oological writers. Nuttall says: "They often breed in winter in more temperate countries, as in January and February; and the young fly in March." Dr. Brewer notes a nest taken in Vermont in early March. Notes taken from Mr. Trippe, published in *Birds of the Northwest*, by Elliott Coues, M. D., mention the appearance of young at a time to suggest that the eggs were laid in April and May. We are still much in doubt of the correct time of the nesting of the crossbills and but very little comparatively, has been written on the subject. Of the nesting habits, Nuttall, one of the first to describe them says: "The nest is situated in the forks of a fir tree; and the eggs, four or five, are of a greenish-gray, with a circle of reddish-brown spots, points and lines, disposed chiefly at the larger end; the lines also often extend over the whole surface of the egg." Dr. Brewer in describing the eggs says: "The eggs are four or five in number, about 0.85 by 0.52 in size, very pale greenish, variously marked in dots and blotches, with different shades of lilac and purplish-brown."

The form of this bird's bill

is very singular, but upon slight investigation and study of the habits of the crossbill it will be seen that the peculiar lapping of the upper mandible with the lower, produces a conformation, not a deformity, admirably adapted to the needs of the bird in opening cones and exploring crevices. The anatomy and configuration of the body is singular. The head is large, the tail short, the body robust, the legs and feet rather weak for the size and weight. Its feet, although not indicating it in their formation, are much used for climbing; the bird is quite scansorial in its habits among the pines, and with its bill used as a third hand sometimes much resembles a parrot in its movements.

—:O:—

COINS OF CANADA.

This article will treat of the silver and copper coins of Upper and Lower Canada and their colonies.

SILVER COINS.

There are three *very rare* and interesting pieces coined for the French Colonies (Canada) called the 30 sol, 15 sol, silver; and the 3 sol, base silver. The 30 and 15 sols were coined in 1658 and 1670, during the reign of Louis XIV. The 3 sol piece, from 1738 to 1740, under Louis XV. The obverses of the first two bear the portrait of the reigning sovereign, and the third, a crowned L. The next series consist of three pieces, viz: $\frac{1}{4}$, $\frac{1}{2}$, 1-16 of a dollar. These were coined for use in Canada as well as other British colonies. The obverses bear a crowned anchor with their values in Roman numerals both at the right and left of the upper part of the anchor, surrounded by the Latin inscription "Coloniae Britan Monet;" with date 1822. These pieces are quite scarce and difficult to find. The next series, consisting of 50 cent, 25 cent, 20 cent, 10 cent, 5 cent pieces, are the silver coins in present use. The 5

cent and 10 cent pieces were coined nearly every year from 1858 to the present time. The 20 cent piece was only made in 1858. The 25 cent and 50 cent pieces from 1870 to the present time with a few exceptions. These five pieces bear on their obverses a crowned portrait of Queen Victoria, with "Victoria Dei Gratia Regina" above, and "Canada" below. Their reverses have their values and dates in center, surrounded by a wreath, with a crown above values. These eleven types with their different dates cover the silver coinage of Canada. But there are some minute varieties which the careful student will discover while studying these coins. For instance, the 50 cent, 25 cent, 10 cent and 5 cent pieces of 1872 are found with and without the letter H. These coins form an interesting collection.

COPPER COINS.

No. 1 is a 12 denier or 1 sol piece, bearing the dates 1721 and 1722, which was coined for the French Colonies (Canada). There are several varieties which are quite rare. The obverse bears two crowned Ls, surrounded by the Latin motto "Benedictum Sit—Nomen—Domini." The reverse, "Colonies Francoises" 1721 or 1722, and the letter H under date.

No. 2 Obverse, a seated figure of a female with a harp, underneath the date, 1781; above, "North American Token." Reverse, a ship sailing to the right. "Commerce" above.

No. 3. Obverse, a priest blessing some children in charge of a woman; surrounded by "British Settlement Kentucky;" date, 1796. Reverse, "Copper Company of Upper Canada," in center; surrounded by a ring; outside of ring, "One Half Penny."

No. 4. Obverse, Neptune with a four-pronged spear, reclining on the edge of the ocean; date, 1794, and a Latin motto surrounding this figure.

Reverse, the same as No. 3.

Nos. 5 and 6 are two pieces of *very rude* workmanship, bearing the date 1811. Obverses, a poor portrait, facing the left. Reverses, a rough-looking seated figure. They are usually found in very poor condition.

No. 7. Obverse, ship sailing toward the left. "Success to the Commerce of Upper and Lower Canada." Reverse "Sir Isaac Brock, Bart. The Hero of Upper Canada, etc.," 1812.

No. 8. Obverse, the same as No. 7. Reverse, 1816 in center. "Success to Commerce and Peace to the World."

No. 9. Obverse, the same as reverse of No. 8. Reverse, urn on monument, two winged figures putting wreath on urn. A Sir Isaac Brock token. There are several varieties of Nos. 7 and 9.

No. 10. Obverse, same as No. 7. Reverse, "Weir and Larminie, Bankers and Specie Brokers, Montreal, etc."

No. 11. Obverse, a military bust crowned with a wreath of leaves. "Half Penny Token," 1816. Reverse, ship sailing toward the left, in center, "Montreal" above.

No. 12. Obverse, head crowned with leaves, facing the right; "Token," above; below, date, 1820. Reverse, beaver in center, "Northwest Company" above and below.

No. 13. Obverse, a figure of justice blindfolded, holding a sword and a pair of balances; date, 1822. "Leslie & Sons, Toronto and Dundass." Reverse, a plow, facing left, in center, and motto, also, "Token, 2d Currency."

No. 14. A half penny token. Obverse, similar to obverse of No. 13. Reverse, similar to reverse of No. 13.

No. 15. Obverse, a one-masted vessel, under full sail toward left. "Half Penny Token Upper Canada." Reverse, "Commercial Change," 1833; two shovels; one scythe; vise, anvil, etc.

No. 16. Obverse, the same as obverse of No. 15. Reverse, "To Facilitate Trade;" plow, facing right, 1823 and 1833.

No. 17. Obverse, the same as No. 15. Reverse, "Commercial Change;" 1820; two shovels and one anvil.

No. 18. Obverse, the same as reverse of No. 17. Reverse, similar to obverse of No. 15.

No. 19. Obverse, similar to obverse of No. 15. Reverse, the same as reverse of No. 16.

No. 20. Obverse, similar to obverse of No. 15. Reverse, "Commercial Change." 1815. Indian with bow and arrow, and dog.

No. 21. Obverse, similar to obverse of No. 15. Reverse, "Commercial Change," 1821; barrel with words, "Upper Canada" on the side.

No. 22. Hole in center, "Good for one copy," "Evening Globe."

No. 23. Obverse, portrait, "Geo. IV., D. G. Brit; Rex." Reverse, "1-100 Dollar" in center of wreath; outside, "Colonial, 1823."

No. 24. Obverse, the same as obverse of No. 23. Reverse, the same as reverse of No. 23. except "1-50 Dollar" takes the place of "1-100 Dollar."

No. 25. Obverse, steamboat. 1821, "Lanzon." Reverse, "Four Pence Token," "Bon pour knit sols."

No. 26. Obverse, "Canada," "1830 and 1841." Reverse, "Half Penny."

No. 27. Obverse, portrait. "Province of Upper Canada." Reverse, seated figure, 1832; "Half Penny Token."

No. 28. Obverse, head of Queen Victoria; "Dominion of Canada" "Province of Quebec." Reverse, "Devins and Bolton; Druggists, Montreal;" "Use Devins' Vegetable Worm Pastilles," July 1st, 1867."

No. 29. Obverse, a still; "Cash paid for all sorts of grain," 1837.

Reverse, barrel, "Brewers, Distillers," etc.; "Thos. and Wm. Molson. Montreal."

No. 30. Obverse, engine; "Montreal and Lachine Railroad Company." Reverse, beaver beside a tree; "Third Class;" Hole through center.

ERWIN G. WARD.

Palmer, Mass.

—:O:—

A NEW FLORIDA BULIMULUS

Bulimulus Hemphilli. U. S., Fig. 449 of Binney's Manual of American Land Shells.

Shell imperforate, very thin, transparent, amber colored and marked by coarse lines of growth; body whorl with six revolving and slightly interrupted brownish-red bands; the lower two being close together and upon the rounded base, spire obtuse, whorls five, slightly convex, the body whorl constituting two-thirds of the entire length of the shell. Suture slight, base uniformly and gracefully rounded. Aperture direct and oval, peristome thin. "Jan and lingual dentition that of nitelinus." (B. Serpenteris, Say), Dr. Binney. Length, 19 inches, diameter, 8 inches. Hab. both coasts of South Florida.

Remarks: Mr. Henry Hemphill, of San Diego, Cal., first found a few dead and badly preserved specimens of this shell in 1834 at Marco, West Coast of Florida. From these Dr. Binney thought them identical with *B. Floridanus*, Pf. See Manual of American Land Shells, 1885. Numerous specimens collected during the past summer by the author and Mr. G. W. Webster and son prove beyond a doubt that this is not identical with the shell figured and described on page 407 of Dr. Binney's Manual. The *B. Hemphilli* is more venticose, not angular at base, imperforate, differs in color, and in fact, there is a general difference.

BERLIN H. WRIGHT.

Lake Helen, Fla.

EDITORIAL.

A NEW magazine "The Big Science and Nature," is promised to appear soon from Lynn, Mass., under the management of H. M. Downs, former publisher of "Tidings from Nature," and W. S. Beckman, the well-known mineralogist, which is a sufficient guarantee that it will be a good one.

MR. C. P. WILCOMB, the well-known collector who is spending the winter at Visalia, Cal., recently made us a short but pleasant call.

SEVERAL prominent *Philatelists* have promised to write articles for our magazine and we hope to present to our readers some interesting philatelic literature beginning with our next issue.

FOR some unknown reason, part four of the series of articles on "*Canadian Wild Birds*," has failed to reach us. We hope, however, to have it ready for our next issue.

A NUMBER of interesting illustrated articles are now on hand, and will soon appear in this magazine, among which we might mention, "Remains of an Extinct People in California," "Rare Coins in the San Francisco Mint," etc.

REVIEW TABLE.

The 1888 edition of "The American Philatelic Press Directory," published by Geo. H. Richmond, 5 Beek

man St., New York, is brimfull of useful information for the collector. It contains a list of all the principal Philatelic publications with full information in regard to date of establishment, size, circulation, advertising rates, subscription prices, etc. It also gives a list of Philatelic publications which have suspended publication, followed by a list of names and addresses of prominent Philatelists. Next comes a list of Foreign Philatelic publications and display advertisements of Philatelic dealers and publishers, besides much other useful information.

We have received the following catalogues and price lists: Scott Stamp and Coin Co., 721 Broadway, New York. Catalogue of U. S. and Foreign Stamps, Coins, Medals, Stamp Albums, Philatelic and Numismatic publications, Minerals, Confederate Notes, etc., R. W. Mercer, 147 Central Ave., Cincinnati, Ohio. Price list of Fossils, Curiosities, Indian Relics, Confederate Money, etc., Henry Gremmel, 109 Second St., New York. Catalogue of U. S. and Foreign Stamps, H. F. Washburn, 273 Pleasant St., Fall River, Mass. Price list of U. S. Copper Cents, Curiosities, Relics, etc., Geo. F. Whittemore, 140 Main St., Fitchburg, Mass. Price list of Minerals, H. H. Tammen, 1624 and 1626 Larimer St., Denver, Col. Large illustrated catalogue of Rocky Mountain Minerals. Polished Agate, Souvenirs, Indian Relics, Stuffed Animal Heads, etc., H. A. Corhart, Collamer, N. Y. Catalogue of Ornithological Engravings.

GEOLOGY.—A Series.

Lapides crescent; vegetabilia crescent et vivunt; animalia crescent, vivunt et sentiunt. Stones grow; plants grow and live; animals grow, live and move. As our earth was made in the rough before it had vegetable and animal life upon it, let us take up the study of it from a geological standpoint. As given before, geology is divided into four parts: physiographic, lithological, dynamical, historical. Taking them up in regular order, we have first: "Physiographic Geology. The earth has a circumference of 24,899 miles. Its form that of a sphere, flattened at the poles, making the equatorial diameter 7926 miles, about $26\frac{1}{2}$ miles greater than the polar. About $\frac{8}{11}$ of the earth's surface being depressed below the rest and occupied by salt water. The sunken part being called the oceanic basin, and the large land areas between, continental plateaus. The mean depth of the oceanic depression is about 12,000 feet and the mean height of the land nearly $\frac{1}{12}$ of this or 1000 feet. The greatest depth reached by soundings south of the Ladrões is 27,450 feet. The greatest height on the land (in Mt. Everest, of the Himalaya's,) is 29,000 feet, the difference in extreme height and depth being 54,450 feet, a distance of a little over 10 miles. The mean height of Europe, Asia and South America, 1130 feet; of Africa probably not much less than 1130 feet; North America, 750; Australia, 500. The mean depth of the great oceans, North Atlantic and North Pacific, 15,000 to 15,500; South Atlantic and South

Pacific, 13 000 feet. There seems to be a very systematic arrangement of the earth's features. The continents have high borders and low centers, and are, therefore, basin-shaped. Thus North America has the Appalachians on the eastern border, the Rockies on the western, and between them the low Mississippi basin. South America in a similar manner has the Andes on the western border, the Brazilian mountains on the east, and other heights along the north, with the low region of the Amazon and La Plata making up a large part of the interior. Another peculiarity is here shown. The highest borders face the largest ocean. In one other feature are the continents singularly alike—they have a triangular outline pointing southward." Many a pleasing half-hour may be spent, on a winter's evening, looking at the general similarity of physical features of the continents.

C. S. MASON.

EXCHANGE NOTICES.

This column is for the use of subscribers only. Exchange notices must be in by the 15th of the current month to insure insertion in following number, and must be written on separate piece of paper. No postal cards noticed.

I will give you a year's subscription to the "Old Curiosity Shop," without premium, for fifteen Philatelic magazines in good condition, or for five perfect Indian arrow heads labeled with locality.

E. M. HAIGHT,
Riverside, Cal.

Box 24,
Wanted—500,000 U. S. postage, revenue, match and medicine stamps in exchange for foreign stamps.

W. H. VERITY,
Luther, Mich.

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E. P. NEWCOMER,
Ida Grove, Iowa.

For every philatelic paper in good condition sent me, I will give any one of the following Bird's Eggs:—Crimson House Finch, Turtle Dove, Brewers Blackbird, White-rumped Shirke, Mocking Bird, Western King-bird, Cliff Swallow, Barn Swallow, California Sea Shells, Acmae Seabra, Acmae Persona, Acmae Spectrum, Chlorostoma funebre, Lottia gigantea. Curiosities:—Alligator tooth, Chinese playing card, Chinese game stone, Japanese paper napkin, or porcupine quill. No less than three papers taken.

E. M. HAIGHT,
Box 24, Riverside, Cal.

I am breaking up my large collection of Philatelic paper and can supply many good papers. Collectors send list of wants with 2c. stamp for reply.

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A fine piccolo and flageolet combined, German silver keys, etc., cost \$3 at wholesale when new, to exchange for a pair of best climbing irons.

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I will give natural history specimens of all kinds, curiosities, advertising space in this magazine, etc., in exchange for job printing. Send samples and prices of work.

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I will give a Philatelic or Curiosity magazine in good condition for every five cents worth of stamps, old coins, confederate money, rare autographs or Indian relics sent me. No stamps are wanted catalogued at less than three cents each by Scott.

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I will give you any one of the following for every perfect Indian arrow head sent me labeled with locality: Bird's eggs—Cactus wren, Western lark, sparrow, bullock's oriole, tri-colored blackbird, red-shafted flicker. Curiosities—Hawk moth cocoon, silkworm cocoon, skate's egg, two alligator teeth, or three var. California bird wings.

E. M. HAIGHT,
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Wanted—Dana's Manual (complete) of Geology, a good manual of N. A. Ornithology, papers and books relating to West Coast Botany, Lepidoptera and Conchology, Amateur Publications. Send sample copies with offers, also want good minerals. Will exchange western bird skins for the same.

AURELIUS TODD,
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Seventy-five assorted Chinese coins for the best offer of bird's eggs in sets, also U.S. and foreign stamps and coins for bird's eggs.

JAMES LEVY,
3255 Wabash Ave., Chicago, Ill.

Sets, single and second-class eggs for exchange, or petrified wood given for eggs.

A. CALDERWOOD, Jr.,
Santa Rosa, Sonoma Co., Cal.

Stone Indian relics wanted—I will exchange any organ or sewing machine, violin new from factory, for first-class Indian relics, or will exchange coins in pennies and half-pennies dated 1794 and upwards; have 150 to exchange.

WM. H. GWT,
Hamburg, Pa.

Would like to obtain by exchange or purchase, butterflies and moths from Pacific Coast. Specimens from Texas, Arizona and Mexico especially desired.

CHAS. S. MCKNIGHT, M. D.,
Saratoga Springs, N. Y.

Steatite, pyrites, magnetic and specular iron ore for any three minerals 2x2

C. R. NORTH,
Chestnut Hill, Philadelphia, Pa.

Wanted—A good folding ring insect net, will give L. and F. W. shells, minerals, and western bird skins. Would also like manuals of geology, ornithology, conchology and herpetology.

AURELIUS TODD,
Elk Head, Or.

A dime of 1800 for a book on taxidermy.

L. J. CARTER,
Waynesburg, Pa.

Birds eggs to exchange for eggs in sets. Persons having eggs for sale please send their price lists.

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To any one sending me a first-class set of eggs with data or either of the following Nos. (Ridgways Nom.), I will send them by return mail a receipt for compound with full directions for embalming birds, far easier than skinning or stuffing, and will keep them in any climate; having tested it thoroughly for years:

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Box 101, R. D. Goss,
New Sharon, Mahaska Co., Iowa.

For every Philatelic paper in good condition sent me I will give any one of the following: Bird's eggs—Crimson house finch, turtle dove, Brewer's blackbird, white-rumped shrike, mocking bird, Western kingbird, cliff swallow, barn swallow, California sea shells—Acmaea scabra, Acmaea persona, Acmaea spectrum, Chlorostoma funebrate, Lottia gigantea. Curiosities—Alligator tooth, Chinese game card, Chinese game stone, Japanese paper napkin, or porcupine quill. No less than five papers taken.

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